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APPENDIX H

MEDICAL EDUCATION AND TRAINING PROGRAMS IN FEDERAL AGENCIES

REPORT OF THE
SUBCOMMITTEE ON HOSPITALIZATION
COMMITTEE ON FEDERAL MEDICAL SERVICES

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CONFIDENTIAL

U.S. COMMISSION ON ORGANIZATION OF THE
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Committee on Federal Medical Services

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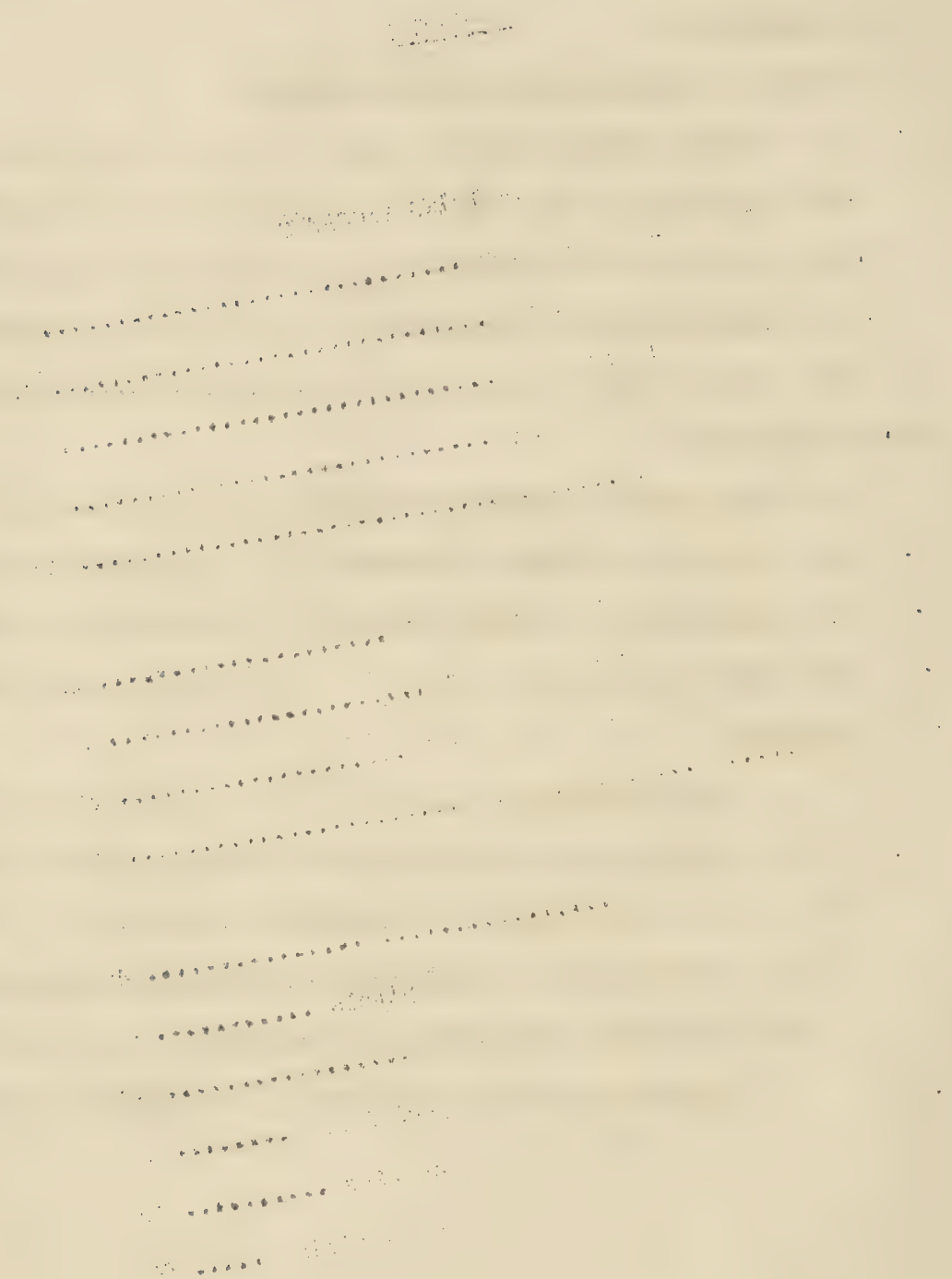
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MEDICAL EDUCATION AND TRAINING PROGRAMS IN FEDERAL AGENCIES

I. Introduction

In the nation's best general and university hospitals, the training of physicians is begun while they are undergraduates in the medical schools, when they serve as clinical clerks, learning the art of history-taking, physical examinations, and the ward care of patients. After graduation the physician serves as an intern for one to two years and he may serve as a resident in general medicine, general surgery, or in one of the specialties, for periods of three to five years. Residents are given increasing responsibility in the care of patients, including independent operative work in surgery.

In judging the advantages and the warrant for such extensive training and the benefit to hospital efficiency, three essential criteria may be applied:

1. Does it guarantee the best and most effective treatment of the patient? It is obvious that a physician or surgeon with the experience of internship, the minimum of hospital training, and with an additional three to five years of increasing responsibility and maturing judgment, is far better qualified to make accurate diagnoses and to carry out proper treatment than a one year rotating intern. Valid mathematical common denominators and sound criteria are found in the statistics of lower mortality, decreased complications and higher cure rates, and permanent follow-up results, in hospitals staffed with residents as compared to hospitals without residents.

2. Does such training improve the teaching function of the hospital, in the training of its professional staff? In all university hospitals it has been found that the resident staff, because of the full-time appointment, close contact with patients, and their long-term training, are especially qualified to take part in the teaching program of the undergraduate clinical clerks and the intern staff.

3. Does the resident program encourage investigative work and original research? Every resident program should, and in the best clinics does, include a period for investigative work, varying in length according to the problem under investigation and the previous experience of the resident in research. Not all residents become research workers, but they respect original work and follow research more intelligently and interestedly. Such experience gives physicians a sounder critique and judgment in evaluating current literature and discourages them from applying new methods and techniques prematurely.

But there is an additional intangible, fundamental advantage in resident training. It maintains and improves the morale of the hospital and its professional staff as nothing else does. Well-trained residents are an invaluable source for staff appointments in the smaller and suburban hospitals. They fertilize the demand on the part of the public for the highest type of medical care.

The desire on the part of recent graduates of medical schools in this country to be qualified by the Specialty Boards stems from several factors. Among them are the greater financial awards

generally available to physicians having Specialty Board certification, the appreciation by younger medical officers of the superior work and services of resident-trained officers, the Veterans Administration requirement of Board certification for appointment as Attending Physician to the Veterans Administration hospitals, and finally, the increasing demand by civilian hospitals for Board certification before appointment to their professional staffs.

Since 1941, the number of approved residencies in this country has increased from a little over 5,000 to approximately 12,000. The number of hospitals approved for residency training, including hospitals of the Veterans Administration, Army, Navy, and Public Health Service, has increased from 610 to over 1150, with many other approvals pending.

Because of this demand for resident training the American Medical Association and the American College of Surgeons have been qualifying hospitals to give this training in increasing numbers. In many instances this qualification has been based upon insufficient inspection and inadequate standards. This has resulted in turning out a large number of short-term, poorly trained residents, and is seriously compromising the value and distinction of long-term training. Poorly qualified hospitals seek recognition for residency training because it has become the fashion and a hospital without residents is declassé, and many hospitals are unable to attract competent interns. By calling such graduates residents they are able to attract more help to carry out the necessary chores usually done by interns.

The education and training programs in the four major medical agencies (Veterans Administration, Army, Navy, and Public Health Service) may be classified, for discussion purpose, into four categories: (1) training programs for interns and residents in medicine and dentistry; (See Appendix E.) (2) training programs for other medical and ancillary personnel in civilian schools or in private, municipal, state, or other federal institutions; (3) training programs (for other than interns or residents) within the agency's installations utilizing the services of civilian lecturers and consultants; (4) medical training aids, such as medical motion pictures and similar audio-visual aids.

A fifth type of training program, commonly known as on-the-job training, is excluded here because it is generally not formalized in budgets or personnel allocations and because it is frequently inseparable from the employee's normal duties.

Although these types of programs are found in all agencies, lines of demarcation are clearest in the Veterans Administration, because of the wider scope of its education and training activities and because a number of these activities have been specifically authorized by law. In the Navy and Public Health Service, and to a lesser extent in the Army, the several programs tend to lose their separate indentities.

Only a limited number of federal hospitals have been qualified for resident training. The advisability of establishing professional training programs in federal hospitals and the need for such training

varies with the five major agencies, the Army, Air Force, Navy, Veterans Administration, and Public Health Service. It is more justified and necessary for the Veterans Administration than for the other agencies because of the large number of Veterans Administration hospitals with acutely ill veterans requiring specialist care. The majority of residents trained in the Veterans Administration hospitals under Deans' Committees enter civilian practice on completion of their training and thus yield a tangible return to the taxpayers. They are, however, also greatly needed to staff the new veterans hospitals.

There is no general agreement among hospital administrators and medical educators on what proportion of a resident's services are properly chargeable to training per se and what to the care of patients. Both are clearly involved and the proportion varies according to the specialty and whether the resident is in his first, second or third year. The Veterans Administration estimates a resident's contribution to patient care as equivalent of seven-tenths of a full-time staff physician. The Bureau of Budget estimates the quantitative value of the resident's services as one-half that of a full-time physician. Thus, at least half of the cost of residencies in federal hospitals may be charged to patient care. The full cost of residencies taken outside federal hospitals must be assigned to the training program because the residents make no immediate contribution to the care of the agency's patients.

II. Scope of Education and Training Programs

A. Veterans Administration — Before the close of World War II the Veterans Administration hospitals had no educational program. The hospitals were staffed with full-time Civil Service physicians of mediocre ability in the majority of instances. There were no interns or residents. There was considerable objection at first to the introduction of a residency training program and a lack of cooperation in its introduction.

The conduct and morale in veterans hospitals with consultant, attending, and resident staffs appointed by Deans Committees, has completely changed within two years for the better and resident training in many of these institutions is up to the standards of university hospitals at the present time. The residents now provide a source of supply as attending physicians and surgeons for new and nonteaching hospitals which was unknown in the past.

Special committees of university medical school faculties, called Deans Committees, have been established to organize and control residency training programs in those V.A. hospitals which are located in or near medical teaching centers. If the area includes more than a single medical school, as in New York City and Chicago, for example, the Deans Committee includes representatives of all participating schools. There are 45 Deans Committees representing 59 medical schools. These Deans Committees are responsible for the standards of training, clinical practice, space utilization, alterations, selection and use of equipment and supplies, selection

of residents and formulation of their courses of study and the supervision of the residents and the consulting and attending staff. In fact, the Deans Committees control the practice of medicine and surgery in V.A. hospitals as fully as in the university hospitals.

In a few areas where there are outstanding private clinics, a committee of the clinic staff performs the same functions as a Deans Committee in the supervision of clinical practice and residency training. This is illustrated by the relationship of the Menninger Foundation to the V.A. neuropsychiatric hospital in Topeka, Kansas.

Deans Committee members are not compensated on a salary basis but they may be paid consultant's fees (up to $50 per diem) when actually working on V.A. matters.

Dental Residency Committees perform the same functions in dental teaching in V.A. hospitals as the Deans Committees do in medicine.

To be put under Deans Committees the V.A. hospitals obviously had to be located in or near communities in which medical schools were located. Hospitals situated in isolated areas, distant from medical centers, remain a very serious problem and the Chief Medical Director is still opposing the construction of new hospitals in these areas because of the impossibility of adequately staffing them. The experience with institutions supervised by Deans Committees has provided every convincing argument.

Ninety-five V.A. hospitals and mental hygiene clinics are supervised by Deans Committees:

General Medical and Surgical Hospitals	41
Psychiatric Hospitals	35
Mental Hygiene Clinics	11
Tuberculosis Hospitals	8

Not all these teaching hospitals function on the same high standard of efficiency and accomplishment. The factors determining this efficiency are proximity to medical schools, the duration of Deans Committee supervision, the quality of attending and consultants staffs appointed by the Deans and their interest in developing a training program, and the equipment and facilities for original clinical and laboratory investigative work. In some areas more than one V.A. hospital is under the supervision of a Deans Committee and they vary in meeting the standards of resident training. (See Appendix A) the organization and activities of many of the Deans Committees hospitals are comparable to those in university clinics.

Two additions to the training program in Deans Committee V.A. hospitals have been proposed. One is the appointment of interns. The replies to a subcommittee questionnaire to the Deans Committees (Appendix A) indicate that there is a difference of opinion regarding the wisdom or need of interns. The Deans stated that the principal objections were: (1) the lack of female and obstetrical patients would mitigate against recognition by the AMA, (2) the demand for interns by nonfederal hospitals, especially the smaller ones in non-urban areas, is far in excess of the supply of graduating medical

students, and (3) the need for interns to do the routine clinical laboratory work is much less than in many civilian hospitals because of the availability of other technical help in V.A. hospitals.

The Veterans Administration has recently (July 12, 1948) proposed that clinical clerks from the medical schools be used in V.A. hospitals and regional offices. This is feasible only in V.A. hospitals located in or near cities having medical schools working with the Deans Committees. In the hospitals where the experiment has been tried there has been a general approval of the interest and careful work done by the clinical clerks.

Cost — An estimated $4 million exclusive of the salaries of residents, will be spent for medical education and training in the Veterans Administration during fiscal year 1949.

On June 30, 1948, the Veterans Administration employed 1,868 residents in 75 Veterans Administration hospitals and 13 regional offices. Nearly 75% (1343) of these residents were in Internal Medicine, General Surgery, and Psychiatry. It is also in these fields that the largest number of vacancies exist. Of 397 vacancies, 170 were in psychiatry. Plans for fiscal year 1949 call for 2500 residents, although it is doubtful whether vacancies in all specialties can be filled.

Residents who are veterans are paid $3,300 a year, minus the cost of quarters, subsistence and laundry, if they live at the hospital. The maximum salary for non-veteran residents is $2400 for

junior residents, $2700 for intermediate residents and $3,000 for senior residents. While the number of non-veteran residents is now very small, it will undoubtedly increase in the next few years.

Wherever the requirements of the Specialty Board of a resident's choice cannot be completely filled within Veterans Administration hospitals, training in affiliated schools or other medical institutions, may be authorized for not to exceed 50% of the period of appointment. About $1,000,000 will be spent in fiscal 1949 in the affiliate training of residents and their training will be supervised by 440 consultants and attending physicians making a total of 14,000 visits at an estimated cost of $625,000. Residents completing their training, even when that training has included assignments outside the Veterans Administration, are not required to remain with the Veterans Administration.

Internships in the Veterans Administration (authorized by Public Law 722, 80th Congress) will not begin until fiscal year 1950. Initially, not more than 200 interns will be employed at an annual salary of about $800. An intern's total compensation, including costs of subsistence and quarters, will not exceed $1800 a year. These interns are expected to displace a corresponding number of residents. No commitments for future service in the Veterans Administration will be required.

The Veterans Administration will assign almost 2500 professional personnel, other than residents, for formal training not to exceed 90 days, in schools and other institutions during fiscal year 1949. In a few cases this training will be given in its own installations.

Tuition and travel costs will aggregate about $1,400,000. While most of the staff will be doctors, dentists and nurses, training will also be given to such ancillary personnel as clinical psychologists, occupational and physical therapists, social workers and dietitians. No commitment for further service is required, but Public Law 293, 79th Congress, provides that any person attending a course of training shall be required to reimburse the expenses of this training if he voluntarily leaves the Veterans Administration within two years after completion of the course.

In fiscal year 1949, the V.A. also plans to allocate about $500,000 for lectures, demonstrations and scientific discussions by consultants in 100 hospitals. This will provide for an average of two guest lectures a week in each of these hospitals.

Recommendations — Inasmuch as many V.A. hospitals are in close contact with university clinics and teaching hospitals, veterans receive care under the best civilian auspices. This avoids the appointment of a large army of government physicians. For these reasons, and because the care veterans are now receiving is far better than that provided before the establishment of Deans Committees, the residency training program should be continued only in those hospitals near teaching centers and under the supervision of Deans Committees. The number of hospitals which undertake to provide residency training should remain limited.

The appointment of managers, chief of medical service, and executive officers of the several medical services should be most carefully supervised. Civil Service regulations and the control of the technical and nonprofessional personnel has caused considerable confusion and difficulties to managers, Deans Committees, and the attending and consultant staffs in many teaching hospitals. Competent workers and technicians get recognition and advancement slowly and incompetent workers cannot be discharged after certain periods of service. The establishment of standardized staff requirements (Tables of Organization) for all hospitals of certain categories, regardless of the amount or character of work being done, makes improvement or expansion of laboratory and research work difficult. These two handicaps should be remedied.

Residents should be spared the elaborate paper work involved in the care of veterans. Trained clerical help can do this work more efficiently than a shifting group of residents as proven by the experience of the hospitals which have tried it.

Living quarters are greatly needed for the full-time resident staff in all the V.A. teaching hospitals. Because there was no resident training program prior to 1946, hospitals built before that time have no such quarters. Before 1946 the veterans were cared for by full-time Civil Service physicians who generally lived outside the hospitals.

B. Department of Army — A Graduate Educational Training Program was formally established by the Army Medical Department on January 1, 1947 to provide "Army physicians and surgeons with opportunities for progressive medical education and training, by taking the maximum advantage of the excellent facilities and clinical material which are available in our Army general hospitals. The program is designed to afford internships and residency training in the various special fields of medical and surgical practice."

This program, designed to develop and adequate number of qualified specialists in the various fields of medical practice, was prepared after consultation with the American Medical Association, the American College of Surgeons, the Advisory Board in the Specialties, and the various Specialty Boards.

The program was in operation, on June 1948, in seven hospitals in continental United States and one in the Canal Zone, as follows:

Name and Location	Total Beds Available
Brooke General Hospital San Antonio, Texas	1,862
Fitzsimons General Hospital Denver, Colorado	2,595
Letterman General Hospital San Francisco, California	2,135
Oliver General Hospital Augusta, Georgia	1,450
Walter Reed General Hospital Washington, D. C.	2,050
Madigan General Hospital Tacoma, Washington	1,729
Percy Jones General Hospital Battle Creek, Michigan	2,519
Gorgas Hospital Panama Canal Zone	600

(For a list of the approved residencies in each Army hospital, see Appendix B.)

Most of these hospitals are located in or near medical teaching centers. For the most part they are housed in large modern buildings suited to the needs of hospital operations. Each is fully equipped with modern laboratory, surgical, radiological, library, and other medical facilities, and with appropriate teaching aids. All, except Gorgas Hospital, operate under the direct control of the Surgeon General.

The clinical material in Army hospitals is not limited to the diseases and injuries of males of military age. Young and aged dependents of military personnel and retired personnel provide a variety of chronic conditions and diseases of advanced age. Female patients from women's corps and dependents represent a sizable portion of the patients treated. The Army believes that the amount and variety of clinical material available for teaching purposes is comparable with that of similar civilian institutions. Based upon the present volume and variety of clinical material the hospitals now engaged in teaching can accommodate approximately 450 residents and 200 interns.

The exigencies of wartime service reduced the number of diplomates of specialty boards among Regular Medical officers and the majority performed only administrative duties during the emergency. Hence the remaining qualified Regular Army officers are in need of additional professional training in order to re-establish their

standing. Three hundred civilian diplomates have been appointed to the attending staffs of the Army hospitals to provide teaching service six days per week in collaboration with the available military staff.

In his supervision of the Graduate Professional Educational Program the Surgeon General is assisted by the Education and Training Division and by a Professional Education Committee. The Committee is composed of representatives of the Education and Training Division, the Personnel Division and the Medical, Surgical, Neuropsychiatry, Laboratory and Physical Medicine Consultants Divisions. The commanding officer of each teaching hospital is responsible for the conduct of the training program for the interns and residents assigned. He is assisted by a hospital education committee composed of the chiefs of services of the hospital and representatives of the civilian attending staff. Responsibility is delegated down to interns through chief residents, senior residents, residents and assistant residents. Each member of the teaching staff is responsible for the presentation of a specific phase of training in his specialty. The resident staff of each hospital is composed of Regular Army Medical Corps officers and those physicians who have applied for commissions. Interns are selected from male applicants who are physically qualified for appointment as medical officers in the Organized Reserve Corps of the Army. During their one year rotating internship they serve as Reserve officers on voluntary extended active duty. Selections and appointments are made by the Surgeon General on the basis of written applications.

The Surgeon General is establishing a special residency training program for "clinical physicians" to begin operation at the Madigan and Percy Jones General Hospitals on 1 July 1948. This term designates all Army physicians who do not limit their practice to one of the special fields of medicine or surgery. Approximately three-fourths of all Medical Corps officers are expected to come under this designation.

Career Management Plan — The Department of the Army (War Department Circular 142, June 5, 1947) placed the responsibility for career planning for all medical department personnel, regardless of assignment status, upon the Surgeon General and basic career assignment patterns for medical officers have been prepared.

In order to meet military medical requirements, Medical Corps officers have been divided into three groups for purposes of career management. These groups are the professional specialists, the medical commanders, and the medical staff officers. Permanent promotion in the regular corps is dependent primarily upon seniority and length of time in grade before the individual officer is eligible for selection by a promotion board. It is also anticipated that a similar promotion selection plan for temporary promotions will be in operation for the Medical Department.

When a career pattern has been chosen and finally determined for the individual medical officer, he will be continued in assignments within his group suitable to his classification. The really

forward step in this plan is the policy promise that ordinarily, an officer will not be shifted, as in the past, from one principal group to another after he has developed competence in his specialty field. However, the opportunity is available for an individual officer to transfer from one major group to another for sufficient reasons.

The period of basic training is fixed at three years. During this period, each officer will receive initial basic military medical training at the Medical Field Service School. Those officers desiring to serve with the Air Force will also take the basic course at the School of Aviation Medicine. After formal basic training, the officer's potentialities for professional specialization will be studied, and he will be given opportunity to state his interests and preference toward a particular career pattern. At this time, he may be selected for residency training in a particular professional specialty.

Professional Specialists Group — If selected for residency training in a specialty, the officer is assigned to that service for a one-year period. After completion of one year of training the officer may be selected for additional residency training with a view toward completing the requirements for certification by an American Specialty Board. Reappointments for residency training are made upon a competitive basis considering all residents in the same level of training in a specialty in all the teaching general hospitals when selecting residents for advancement. During the period of specialization and preferably

prior to the completion of the tenth year of service, each officer in the professional specialists group is expected to attend the tactical and administrative phase of the Advanced Branch Course at the Medical Field Service School. Officers in this career group do not ordinarily have the opportunity for training in the higher level service schools such as the Command and Staff College, the Armed Forces Staff College, or the National War College.

Costs

On June 30, 1948, there were 108 interns in Army hospitals and 192 vacancies for interns. Although no service commitment is expressly required, past experience indicates that 75% to 80% of those completing internships in Army hospitals will seek Army residencies. These interns are First Lieutenants with annual salary and allowances of approximately $5,000. There were also 300 Army interns in civilian institutions, each earning about $5,000 per year.

On June 30, 1948, the Army employed in eight hospitals a total of 381 residents, of which 199 were in their first year, 121 in their second year and 61 in their third year of training. For fiscal year 1949, 502 residents in Army hospitals were authorized. Percentages of residents in each rank as of June 30, 1948 were as follows:

Rank	Percentage	Compensation Estimated
Colonel	4%	$9,000
Lt. Colonel	35%	8,218
Major	24%	7,021
Captain and Lt.	37%	5,345

The average salary of all residents in Army hospitals approximates $6,900. No service commitment is required of these residents, but many are career officers who are expected to remain in the Army. In addition 300 Army residents are authorized in civilian institutions during fiscal year 1949 at an average salary of $5,345 per year.

Although the Army will spend $1,090,050 for the services of 1,500 consultants for 21,800 days in the zone of the Interior, no budgetary distinction is made between the use of consultants for residency training and for the treatment of patients.

The Army will also engage the services of 104 civilian consultants during fiscal year 1949 to lecture and teach in the Far East Command, European Command, and Panama at an estimated cost of about $2,000,000.

During fiscal year 1948, the Army spent $77,000 for tuition for 178 medical and allied personnel, exclusive of residents and interns, in civilian institutions. There is no service commitment following this training. Army interns and residents assigned to civilian institutions are required, upon completion of their training, to serve an equivalent period in the Army.

Recommendations — The training programs for interns and residents are ample evidence of the intent and effort of the Army Medical Department to reach and maintain high standards in medicine. However, unlike the Veterans Administration and civilian hospitals, civilian consultants are used

merely in an advisory capacity rather than in the day by day supervision of residents.

The need for physicians in the Regular Army Medical Department is obvious, but the attempt to train specialists in Army installations in the large numbers now planned is questionable. In time of war the needs of the military must be met from available civilian specialists who have been trained in civilian centers. The work of Army physicians during peacetime (as well as in combat areas) requires paper work and administrative duties as well as familiarity with tactical and manoeuvre problems that are foreign to civilian physicians. This training may well be given to the large group of "clinical physicians" for whom a three-year residency is now organized. In peacetime the Army hospitals can draw, as they do now, from the civilian supply of specialists.

Promotion, dependent primarily upon seniority, may be considered necessary in the Medical Department of the Armed Services, but this standard does not adequately recognize quality and ability as the prime factors in professional advancement.

The establishment of the rudiments of a career plan is commendable.

C. Department of the Navy — The problems in the training of Navy medical personnel for their duties ashore and afloat are different in certain respects from those of other federal agencies. Ashore, the duties of the medical officers do not differ essentially from those in the other agencies but, afloat, the conditions require some specialized training.

Intern training of the general rotating type was established in Navy hospitals in 1924. At present, such training is given in twenty hospitals, all of which have been approved by the Council on Medical Education and Hospitals of the American Medical Association. The internships are a one-year rotating type, through internal medicine, surgery, pediatrics, obstetrics, and their related subspecialties, together with experience in laboratory and radiologic diagnosis. The training is under the supervision of an Intern Committee, made up of chiefs of medicine and surgery, a member of the reserve consultants staff, and other medical officers as designated by the commanding officer. Special emphasis is placed upon diagnosis and treatment of medical conditions and on pre and postoperative care of surgical patients.

> In order that interns may be well qualified and equipped for independent naval duty, each should perform a minimum of six appendectomies, six hernias, and serve as an assistant in twelve other major operations. In obstetrics, the intern should obtain training and experience by delivering under supervision at least 25 patients. (NAVMED-762 (Revised) pp 9 and 10).

The Navy has been a pioneer in the use of audio-visual aids to education and they are being used extensively in the training of interns and residents. There is no doubt that audio-visual education in certain fields of medical sciences, especially in anatomy and embryology, in parasitology, and in the pathogenesis of disease offers great possibilities. It is the duty of the head of the Intern Committee in each hospital to integrate these aids in the teaching program.

Interns are required to attend departmental, clinico-pathological and journal club meetings. Each intern is required to present at least one paper. Bedside teaching in the diagnosis and indications for treatment are the chief disciplines in the training of the interns.

In the Navy "residency type training" is the term applied to that medical experience acquired after a rotating internship. Approval of residency training is for limited periods in most instances, such as one to two years of the total experience necessary for qualification for American Boards, or for accumulation of credits for the American Colleges of Physicians and Surgeons.

Eight Navy hospitals have been designated as centers for residency training: Bethesda, Chelsea, Great Lakes, Long Beach, Oakland, Philadelphia, San Diego, and St. Albans. These hospitals have been surveyed by a representative of the Council on Medical Education and Hospitals of the AMA, and approval by the American Specialty Boards has been obtained in the majority of the specialties. Special courses of instruction in Navy problems include those in aviation medicine, submarine medicine, preventive medicine, industrial medicine, tropical medicine, and epidemiology.

Recipients of graduate medical training are expected to remain in the Navy for fixed periods, as follows:

a. For residencies in Navy hospitals

(1) For one year of residency training, one year of service in the Navy following completion of the residency.

(2) For two consecutive years of residency training, two years of service in the Navy following the residency.

(3) For three consecutive years of residency training, three years of service in the Navy following completion of the residency.

(4) Unapproved residencies require no service agreement.

b. For training in civilian hospitals.

(1) For courses of one year duration, three years of service in the Navy following completion of the course of instruction.

(2) One additional year of obligated service is required for each consecutive year of training course, fellowship or residency beyond the one year.

Costs — On June 30, 1948, there were on duty in the Navy a total of approximately 200 interns in 20 Navy hospitals and 130 interns in civilian hospitals. These interns are all Lieutenants j.g., receiving an annual compensation of approximately $5,000. No service commitment is required of interns who serve in naval hospitals, since it is felt by the Navy Department that their salary and the cost of their training is more than compensated for by their contributions to patient care. On the ot other hand, Navy interns who serve in civilian hospitals are required to serve in the Navy for one year following completion of their training.

On August 4, 1948, the Navy had 280 residents in training in Navy hospitals and 93 in civilian hospitals. In fiscal year 1949 the Navy will employ 300 residents in eight Navy hospitals and 125

residents in 40 civilian hospitals, for periods ranging from eight months to three years.

The following table shows residents and their salaries in each grade on June 30, 1948:

Rank	Percentage	Approximate to Annual Salary
Captain	5%	$9,000
Commander	15%	8,218
Lt. Commander	20%	7,021
Lieutenant	20%	5,689
Lieutenant j.g.	40%	5,000

The average salary for all residents approximates $6200.

About $250,000 has been allocated by the Navy for tuition payments to civilian institutions for resident doctors and for dentists, nurses and other Medical Service Corps officers. An estimated 15,000 lectures and demonstrations will also be provided at a cost of $750,000 per year.

Recommendations None of the Navy residency training is done in hospitals under medical school Deans Committees, a policy that has revolutionized the quality of medical care in V.A. hospitals. Nor is there an organized functioning career training program, such as exists in the Army which has improved the Army training program. Most of the residencies in the Navy are of short term, not of sufficient length or content to qualify for the Specialty Board examinations, and the training of residents is not closely supervised, as in the Veterans Administration, by qualified civilian consultants.

The primary purpose of the medical units of the Armed Forces is the same as that of the whole Armed Forces namely, to be prepared for war. The secondary purpose is to care for the men in the Armed Forces during peacetime. How much of the secondary function can be combined and how much of the care of military personnel and their dependents can be given in civilian hospitals are problems to be carefully considered.

The medical training for the Army, Navy and Air Force must obviously differ in certain respects. But many parts of the training are the same and might better be conducted in federal hospitals to which patients from all three services were sent, rather than to three different installations in the same areas, each being overstaffed, having empty beds and offering less than high quality care and training.

D. Federal Security Agency — Three major units within the Federal Security Agency have education and training programs for medical and related personnel. These are the Public Health Service, St. Elizabeths Hospital, and Freedmen's Hospital.

The training activities of St. Elizabeths Hospital are not included here because they are being considered by the Subcommittee on Psychiatry and Neurology. The training program at Freedmen's Hospital, while nominally part of the official responsibility of the Public Health Service, is in reality under the direction and supervision of the Howard University faculty.

Within the Public Health Service there is not only the more usual residency training program in the Marine and Mental Hygiene hospitals, but also a series of fellowships for the support of promising research workers. During the fiscal year 1948 the National Institutes of Health expended $884,390 for the support of 303 fellows (152 pre-doctoral, 131 post-doctoral, and 20 special) in the prosecution of research projects of their own choice in institutions of their own choice.1/

Hospital residency training in the Public Health Service is supervised by the Bureau of Medical Services, which also administers all foreign quarantine activities, medical inspection of aliens, programs of mental hygiene and of dispensary care for federal employees, and the detail of commissioned officers to other government agencies.

This Bureau operates 26 hospitals and many smaller medical relief stations and has an advisory and consultative relationship with Freedmen's Hospital. Of the 24 Marine Hospitals which range in size from 24 to 869 beds, 21 are general hospitals where all types of injury and illness are treated, two are tuberculosis hospitals, one is the National Leprosarium. There are also two Mental Hygiene Hospitals.

1/ With reference to research fellowships, the only other federal agency which has research fellowships is the Atomic Energy Commission which will spend $1,430,000 in fiscal year 1948 for the support of 89 fellows. These fellowships are awarded for the Commission by the National Research Council.

Almost 40 per cent of all hospital patients are merchant seamen. Others include active duty and retired Coast Guard personnel, federal civilian employees injured or taken ill in line of duty and Coast and Geodetic Survey and Public Health Service Personnel. Work in these hospitals covers many fields of medicine, including an integrated dental service, and thus provides a training ground for those entering the professional staff of many of these hospitals.

Eleven hospitals are affiliated with medical schools in their area, in one or more fields of intern and resident training. In 1948 a total of 157 residents were receiving training in ten Marine Hospitals and in the two Mental Hygiene Hospitals. Slightly more than half the residents were in general medicine and general surgery. Clinical clerkships for third and fourth year medical students are not provided in any of these hospitals because of the geographical location of the hospitals. The training of interns and residents includes careful terminal studies as indicated by relatively high autopsy percentages, varying from 47 to 86 per cent.

However, the hospitals in which graduate training is given are open to criticism in the type and duration of the training, which does not meet the requirements of the Specialty Qualifying Boards. Except for three or four of these hospitals the professional standing of the attending staff is not as high as one finds in university clinics or in the majority of the Veterans Administration hospitals under the supervision of Deans Committees. Nor

are the medical school affiliations as definite or as close as are those in many civilian general hospitals and the Veterans Administration hospitals in which resident training is given.

Costs — Interns and residents in Public Health Service are under the supervision of three separate organization units, namely, the Hospital Division, the Mental Hygiene Division, and Freedmen's Hospital. The largest of these is the Hospital Division which will employ 122 medical interns and 32 dental interns during fiscal year 1949. These interns are commissioned as Assistant Surgeons at salary equivalent to that of First Lieutenants, approximately $5,000 per year. On June 30, 1948 there were 141 residents in ten Marine Hospitals and 16 in the Mental Hygiene Hospitals. The following is the percentage of residents on duty in each grade as of September 10, 1948:

Rank	Percentage	Approximate Annual Salary
Senior Surgeon	1%	$8,218
Surgeon	25%	7,021
Senior Assistant Surgeon	51%	5,689
Assistant Surgeon	23%	5,000

The average salary of these residents is $5,475 per annum. No service commitment is required of residents unless all or part of their training was taken outside the agency, in which case the period of obligated service is equivalent to the period of affiliate training received.

Advanced training for medical ancillary personnel other than interns or residents is extremely small in scope, being limited to

three persons receiving training in hospital administration.

While $134,648 will be spent in fiscal year 1949 for the services of consultants in the eleven teaching hospitals, it cannot be determined what portion of their services are chargeable to the residency training and intern training programs as distinguished from the programs for the medical treatment of patients.

The Public Health Service Hospitals at Lexington, Kentucky and Fort Worth, Texas are under the supervision of the Mental Hygiene Division. There are no interns in either hospital, but each has eight residents in psychiatry. Of these 16 residents, two are Assistant Surgeons, 12 are Senior Assistant Surgeons and two are Surgeons of the full grade. The average salary of these residents is $5,752 per year.

The interns and residents at Freedmen's Hospital are Civil Service employees who receive the following annual salaries, which include in each case $360 for maintenance:

Classification	Number	Salary
Interns	20	$1,560
Residents:		
1st year	7	1,760
2nd year	12	2,060
3rd year	7	2,360
4th year	3	2,760
5th year	1	3,360

The average salary of the residents is $2,173.

Recommendations — The possibility of giving Public Health Service officers training in general medicine and surgery in Veterans Administration hospitals should be

considered, adding special training later in public health, preventive medicine, quarantine, and administrative problems in public health. This would give these residents closer contact with civilian training by Deans Committees and the advantages of close day by day supervision and instruction by qualified civilian specialists.

The Public Health Service performs functions that no other federal agency does but the medical needs of its patients are not materially different from those of any hospital. There is no special type of surgery requiring training in Public Health Service hospitals. Special training courses should be provided for carrying out public health functions preferably to physicians who have had training in general medicine.

The Freedmen's Hospital is well-equipped and in some departments, notably in surgery, unusually well-staffed. It performs a unique function in educating colored physicians. Every encouragement should be given to the development and improvement of its training program.

E. Medical Films The principal type of medical training aid in federal agencies is the combined medical film program of the Army, Navy, Veterans Administration and Public Health Service, coordinated by the Interdepartmental Committee on Medical Training Aids which was established by Secretary Forrestal in 1946. By mutual agreement, representatives of each of these agencies meet monthly to allocate the work and interests and to achieve an integrated program. It is expected that in fiscal year 1949, this

Committee will supervise the production of 300 reels of medical films addressed to lay audiences, technical personnel, and professional and allied scientific personnel. The cost of each reel varies from $500 to $10,000 depending on the subject matter and presentation. At an estimated average cost of $5,000 per reel, this program will cost $1,500,000 during fiscal year 1949. During fiscal 1948 the several agencies produced reels of film as follows:

Army	175
Public Health Service	40
Navy	20
Veterans Administration	4
Total	239

III. Conclusions

There is considerable variation in the scope of the education and training programs in the federal agencies, both absolutely and in the relation of such programs to total medical resources. The most important of these activities is the residency training program. Residency training may be assessed in terms of its effect on the recruitment, retention and utilization of medical personnel, bearing in mind that the indirect influence is probably greater than the direct influence.

A. Recruitment of Medical Personnel — The medical profession is agreed that residency training raises the calibre of medical services to the levels required for certification and for specialty recognition. Since one of the strongest employment incentives for professional personnel is that of serving in a program which offers professional prestige and opportunity for professional growth, residency training programs doubtless stimulate the recruitment of both prospective residents and of other physicians.

Recruitment is further stimulated when the residency program is closely integrated with civilian medical practice. This integration is highly developed in the Veterans Administration, which attributes much of its program during the past three years to the participation of the entire medical community in the care and treatment of veterans. Other agencies might well profit from closer affiliation with medical schools through the medium of Deans Committees or similar arrangements.

In addition to its indirect but important role as a recruitment device, residency training also directly stimulates recruitment by offering physicians the opportunity to attain specialist status at considerably higher rates of pay during the training period than are generally available in nongovernmental institutions. Federal salary schedules for residents give the government a competitive advantage in bidding for their services. (See Appendix C, "Salaries of Residents") However, the disparity in salary scales offered by the various federal agencies introduces a competitive element even between the federal agencies over and above the competition the federal service as a whole offers to civilian institutions. Regardless of how effective such financial inducements may prove to an agency, a number of dangers are inherent in them. One of these dangers is the effect upon morale of offering very unequal compensation for similar qualifications and responsibilities. Furthermore, such unequal competitive advantages may defeat the basis purpose by tending to attract to the higher paying agencies those physicians who place emphasis on financial considerations. The difference in salary scales is much less marked among the Army, Navy and Public Health Service than between these agencies and the Veterans Administration and Freedmen's Hospital. It is possible that the armed services find it necessary to offer higher salaries in order to overcome the reluctance of many physicians to become military men. Where this is the case, measures other than salary should be sought.

In the case of interns, the disparity between the Veterans Administration and the other services will become apparent after the Veterans Administration internship program becomes operative. The maximum of 1800 per year, including all allowances which the Veterans Administration plans to pay each intern compares unfavorably with the $5,000 per year paid by the other services. Even the Veterans Administration salary is above that paid to interns in Freedmen's Hospital.

The residency training is not being effectively used for recruitment purposes by the Army and Navy. The large percentage of their residents earning $7,000 per year or more (63% in the Army and 40% in the Navy) indicates that residency training is being given to career military men rather than being used to attract younger physicians for the purpose of such training.

B. Retention of Medical Personnel Commitments for a period of service in the agency following the completion of the course of training are extensively required in the Navy and to a lesser degree in the Army and Public Health Service.

Even if they were enforceable, it is doubtful whether such commitments are morally justified. In expecting physicians to provide medical service when they would prefer employment elsewhere, an agency is exposed to the dangers of disaffected and disinterested medical staff members. This practice is especially undesirable in a profession such as medicine, where inter-personal relationships between doctor and patient have significant effects upon therapy.

The manpower needs of federal agencies can be met, qualitatively as well as quantitatively, only if they appeal to doctors on the basis of their programs and the professional challenges offered.

C. Utilization of Medical Personnel The distribution of residents by specialists (See Appendix D) shows that the needs of the federal service as a whole are being subordinated to agency needs, many of which are not essential to the agency's primary mission. In psychiatry and neurology, for example, access to all types of psychiatric and neurologic patients, including chronic patients, is a prerequisite of a well-rounded residency program. The Army Medical Department should discharge chronic psychiatric patients to Veterans Administration hospitals rather than retain them in Army hospitals, since an insignificant proportion of these chronic psychiatric patients will ever be returned to active duty. The employment of 49 residents in psychiatry and neurology in Army hospitals (the second largest category of Army residents) and, the proposed employment of 19 such residents in Navy hospitals, makes it clear that a major consideration in the retention of these chronic patients is the availability of sufficient clinical material to meet the requirements of the Specialty Boards.

In this example of subordination of ends to means, there is no intent to minimize the present and future needs of the armed services for qualified psychiatrists. These real needs could be effectively and more economically met by assigning military residents in psychiatry and neurology to Veterans Administration hospitals where abundant

clinical material is readily available and where the shortage of resident psychiatrists is acute. The proposed assignment of 42 military residents (26 Army, 16 Navy) in psychiatry and neurology to civilian institutions can not be justified at a time when Veterans Administration hospitals have 170 vacancies for residents in psychiatry and neurology.

Similarly, the Army has 53 residents in obstetrics and gynecology (six per cent of all Army residents) and the Navy 38 such residents (nine per cent of all Navy residents). The Army will have 34 residents and the Navy 14 in pediatrics. The Armed Forces' training load of 91 residents in obstetrics and gynecology and of 48 residents in pediatrics represent, respectively, 10 per cent and 6.7 per cent of all residents in these specialties being trained in approved residencies throughout the country.

There are a number of other instances of maldistribution of resident medical manpower. Although the number of patients in Army and Navy hospitals is about the same, the Army has only one resident in neurosurgery and none in plastic surgery, where the Navy has seven and two, respectively.

In thoracic surgery, on the other hand, the Army has nine residents and the Navy has only two, while the Veterans Administration with a far greater number of thoracic patients has only eight. The eleven residents to be trained by the Armed Forces in thoracic surgery represent 16.7 per cent of the total number being trained in hospitals approved for this purpose throughout the country.

This use of residency training for purposes not related to the primary military mission results in a harsh cycle which ends where it begins -- a hopeless shortage of specialists. Four stages are discernible in this cycle:

1. The presence of large numbers of dependents and other supernumeraries in General Hospitals creates an increased need for personnel equipped to render the specialized care they require.
2. Residents are trained in such fields as obstetrics, gynecology, and pediatrics in order that these needs may be met.
3. Because these residents have been trained in such specialties, they cannot be effectively utilized either during their period of obligated service or thereafter unless the supernumerary workload is retained or expanded to provide the necessary clinical material.
4. Personnel attrition and the retention or expansion of the supernumerary workload lead eventually to the very condition the first stage was calculated to correct -- a shortage of specialists.

Evidence that the Armed Forces are planning to train even more specialists for the care of dependents than can be justified by the number of their dependents requiring specialized care is furnished by the distribution of residents in certain specialties as between their own hospitals and civilian institutions. Of the 91 residents in obstetrics and gynecology and of the 48 in pediatrics, 37 and 34,

respectively, will receive their training in civilian institutions. The need for training these 71 residents in civilian institutions rather than in Armed Forces hospitals could logically arise only if sufficient clinical material were not available in the latter. If this assumption is correct, a 50 per cent increase in the combined workload of obstetrical, gynecological and pediatric cases would be required to permit the utilization of these specialists. If this assumption is not correct, no justification can be found for the Armed Forces failure to train these residents in their own hospitals.

D. Costs — The major federal medical agencies will spend slightly more than $31 million in fiscal 1949 for the education and training of medical and allied personnel. A reasonable adjustment in the total expenditures to make allowance for patient care costs brings the purely educational costs down to a little more than $21 million, 80 per cent ($17.9 million) of which will go for intern and resident training.

The Veterans Administration, with nearly 70 per cent of the total federal patient load, will spend not quite 30 per cent of the total expenditures for all education and training, while the Army Medical Department will spend slightly more than 40 per cent of the total expenditures for education and training (largely because of the added cost of intern training.) The Veterans Administration will spend nearly 40 per cent and the Army nearly 30 per cent of the total cost of residency training. The Army expenditures for residency training are relatively higher on a per capita basis than other

federal agencies because of the higher average salary and the larger proportion who take their training in affiliated institutions. Neither the Veterans Administration nor the Public Health Service send a significant number of residents to outside institutions for residency training.

Nearly 80 per cent of the total expenditures for advanced training, other than for interns and residents, will be spent by the Veterans Administration.

Approximations of the total expenditures by agency, with appropriate adjustments as stated, are shown in Appendix F.

APPENDIX A

To Deans Committees

1. Do you consider the hospital buildings and equipment adequate for the patients, the training of residents, and the conduct of investigation?

Yes --- 26
No --- 11

2. Under the Manual (MEC-4 entitled "Standard Organization of Veterans Administration Hospitals,") the mission of the hospitals is stated as "to provide all eligible beneficiaries with the best possible diagnostic and therapeutic services in accordance with the highest current professional standards."

To what extent do you believe the Veterans hospitals affiliated with your Committee fulfill this mission?

Yes --- 31
No --- 6

3. (a) In the training of residents and graduate physicians, do you believe the program as you planned it has been sucessfully implemented?

Yes ---------- 31
Improving -------- 1
Unsatisfactory --- 5

(b) Do you believe that intern training should or could be included in such a program?

Yes ---------- 10
No ---------- 22
Questionable -- 2
Possible ------ 3

(c) Do you consider clinical clerkship training feasible or advisable from the Medical Schools in your area?

Yes --------- 19
No --------- 16
Advisable --- 2

4. (a) How much clinical investigation is being done?

Little ---------- 6
Moderate amount --- 12
Considerable ------ 16
None ------------- 10

(b) Do you believe that research studies in the basic sciences should be attempted in veterans hospitals?

Yes --------- 9
Advisable --- 2
No ---------- 26

(c) Are the hospitals under your supervision equipped to conduct such research?

Yes --------- 5
Advisable --- 2
No ---------- 31

5. How hampering to the program of your Deans Committee are the Civil Service regulations and the Table of Organization of the Veterans Administration?

(a) Civil Service Handicap
Yes --- 16
No --- 18

(b) Table of Organization
Yes --- 14
No --- 16

6. What factors do you believe will continue the present success of the work of the Deans Committees and their relation to the Veterans Administration?

The replies stated that the principal determining factors for the continuing success of the V.A. hospitals were:

(a) Continued cooperation of Deans Committees with the central Washington office.

(b) Closer contiguity of the V.A. hospitals with Medical Schools and avoiding isolation.

(c) Appointment of the Staffs of V.A. hospitals by Deans Committees.

... ed additional investment? ... Why? Why not?

Little room 2
Moderate room ... 3
Considerable 4
Very much 10

... e believe that recovery should be in the basis and ...
...uld be obtained in voluntary payments?

Yes ... 4
Probably ... 5
No ... 10

... the financial needs of the reconstruction enterprises
conduct such business?

Yes ... 1
Probably ... 2
No ... 10

...ponding to the wreckage of your Bonds Guaranteeing the ...
... Foreign Securities and the Public of Corporation of ...
...ure Substantially:

(a) Could be made Productive
Yes ... 3a
No ... 4

(b) Years of Depreciation
Ten ... 1a
Fifty ... 1b

...ectors do you believe will continue the present ... of
...k of the Bonds in Britain and their relation to the ...
...ertain?

... explains shall show the principal determining factors
... continuing success of the V.A. investable ...

... Continued co-operation of Young Canadians with the
elected Municipal office.

... Closer continuity of the V.A. Societies with Nations
Schools and evening instruction.

... Appointment of the Staffs of V.A. Hospitals by Dept.
Committees.

(d) Appointment of competent and cooperative Managers in the V.A. hospitals.

(e) Continued elimination of politics from V.A. hospitals, on the part of Congress and of local medical groups.

(f) The knowledge and appreciation of the Veterans of the high type of medical care they are receiving.

(g) Continuation of resident training programs.

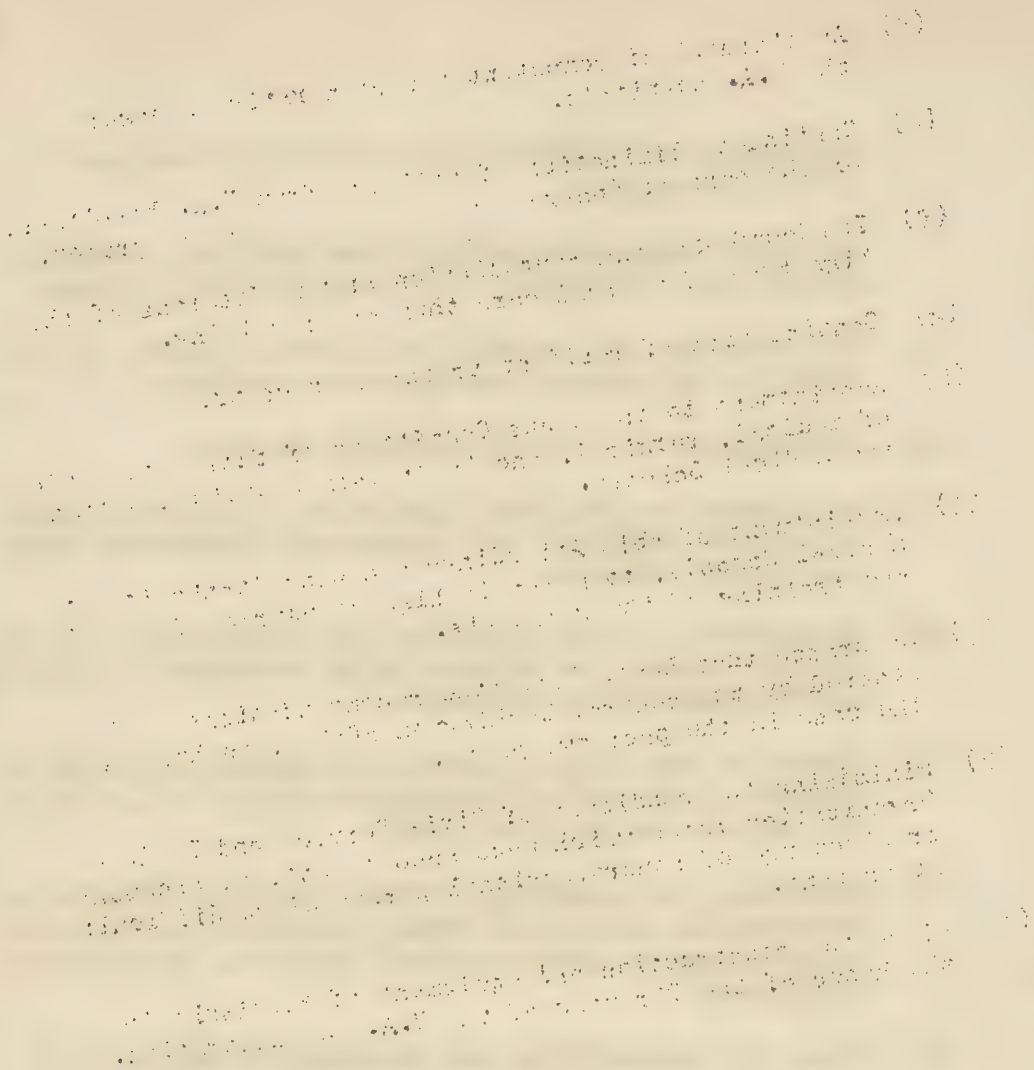
(h) Appointment to the Deans Committees of full time heads of medical, surgical, and laboratory departments from the Medical Schools.

(i) Appointment of able Attendings and Consultants from the Medical Schools, to maintain high standards of teaching and training of the residents.

(j) Assurance that Deans Committee recommendations will be honored by the central Washington office, as has been the case in the past two years.

(k) Minimizing the handicaps of Civil Service and Table of Organization rules which make appointment, advancement, or discharge of nonprofessional personnel so difficult at present.

(l) Place the construction and equipment of hospitals in the hands of the Director of the V.A. Administration.



APPENDIX B

RESIDENCIES IN ARMED FORCES HOSPITALS
Status of Approvals

Key

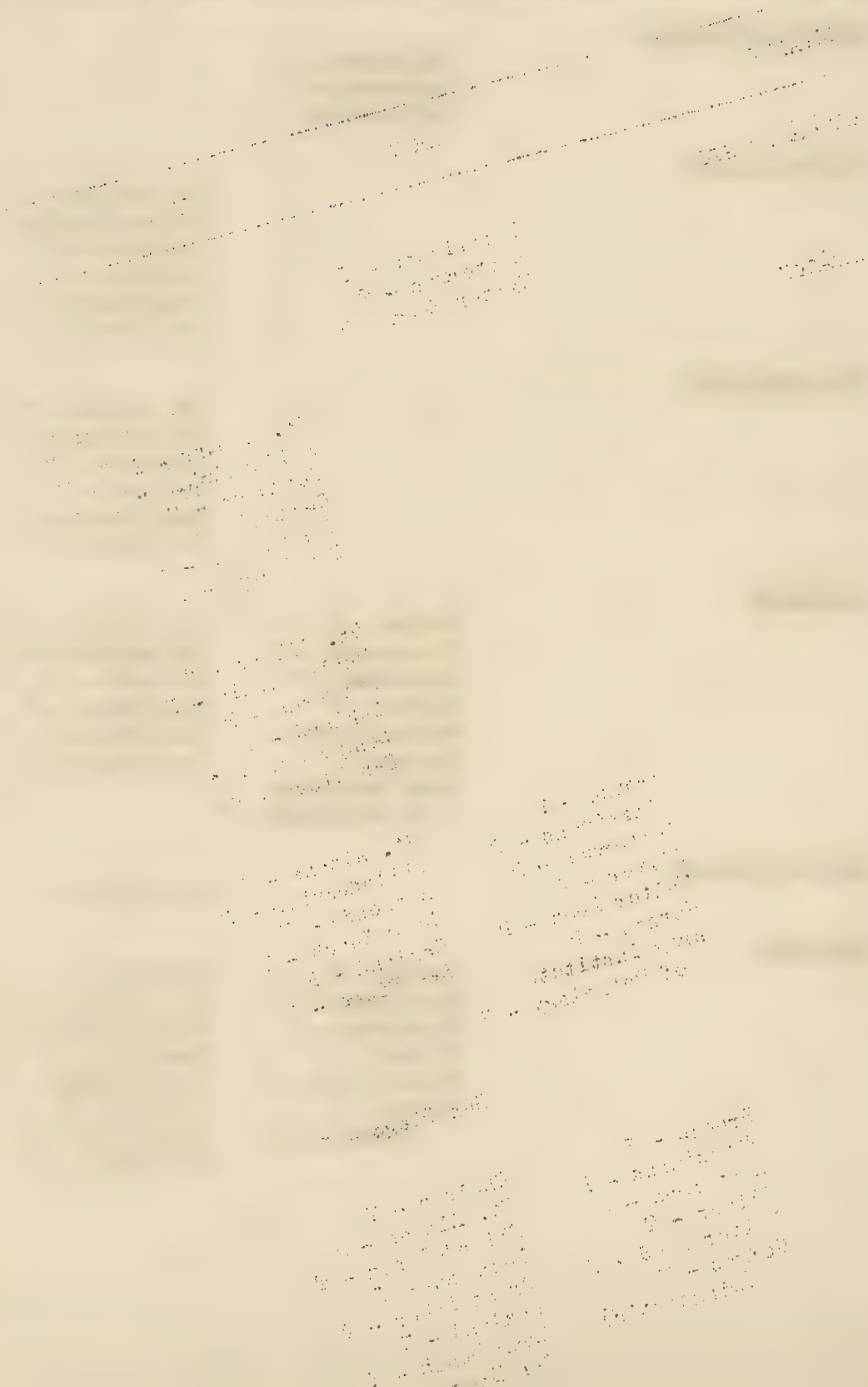
P - Permanent Approval
T - Temporary Approval
R - Council Recm'd to Amer. Board
* - Pending

Data as of July 1, 1948 for Army and November 15, 1948 for Navy.

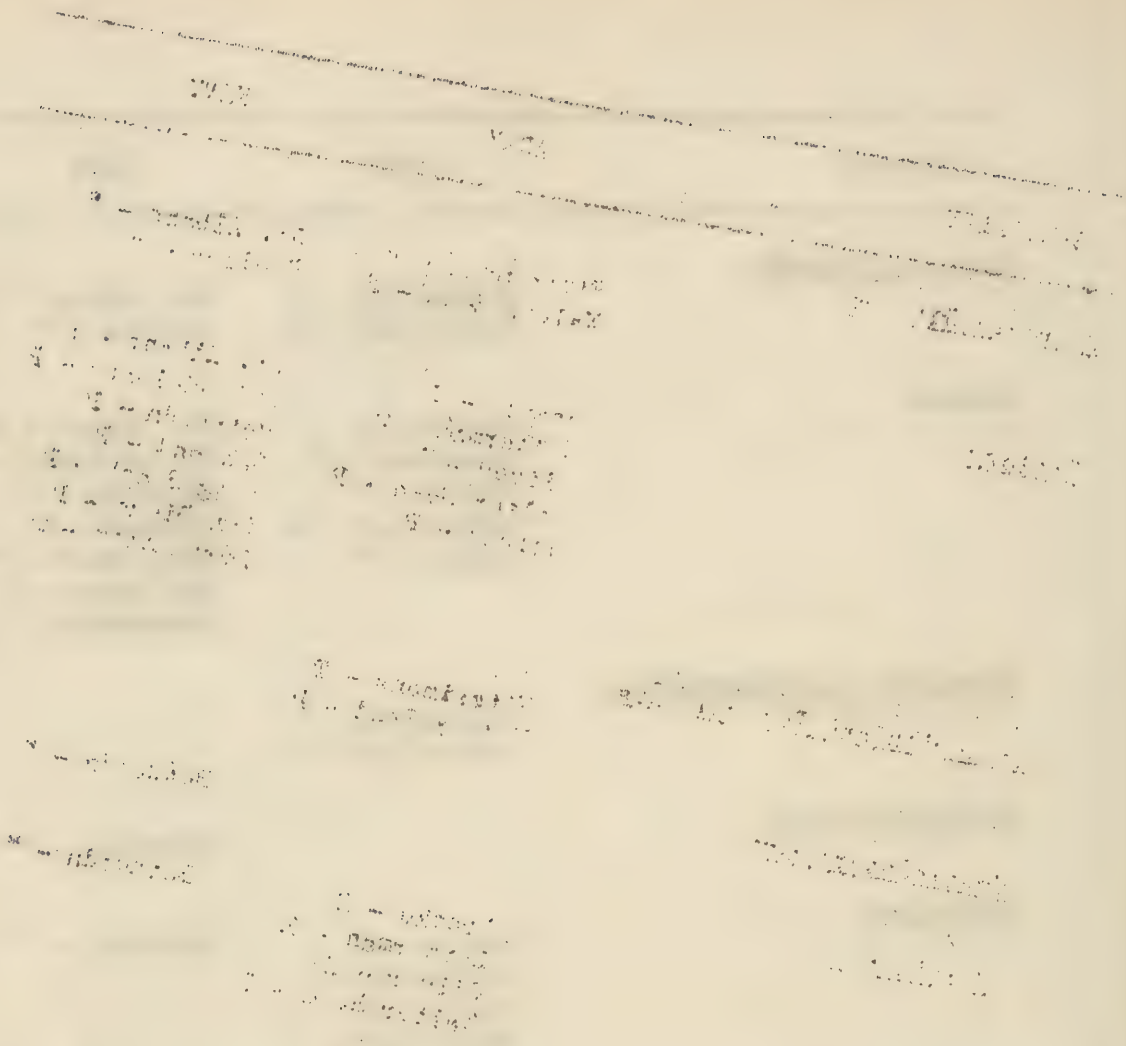
SPECIALTY	ARMY	NAVY
Anaesthesiology	Brooke - T Fitzsimons - T Oliver - T Walter Reed - T Letterman - T	St. Albans - T Chelsea - T Bethesda - T Philadelphia - * Long Beach - *
Dermatology and Syphilology	Brooke - P Letterman - P Walter Reed - P	St. Albans - P Philadelphia - P San Diego - *
Internal Medicine	Brooke - P Fitzsimons - P Letterman - P Oliver - P Walter Reed - P Gorgas - P	Chelsea - T St. Albans - T Philadelphia - P Bethesda - P Oakland - P Long Beach - P San Diego - P
Neurosurgery		Long Beach - * St. Albans - *
Pediatrics	Brooke - R Walter Reed - R	Philadelphia - P Chelsea - P San Diego - * Long Beach - * Great Lakes - * Bethesda - *

SPECIALTY	ARMY	NAVY
Obstetrics and Gynecology	Brooke - T Fitzsimons - T Walter Reed - P Letterman - *	Long Beach - P Oakland - P San Diego - P Great Lakes - P Chelsea - P Portsmouth - P Philadelphia - P Bethesda - T St. Albans - *
Psychiatry and Neurology	Fitzsimons - T Letterman - P Walter Reed - P	Bethesda - P T Philadelphia - T
Eye, Ear, Nose and Throat	Brooke - P T Fitzsimons - P P Letterman - P P Oliver - P R Walter Reed - P R Gorgas - P	
General Surgery	Brooke - P Fitzsimons - P Letterman - P Oliver - P Walter Reed - P Gorgas - P	St. Albans - P Philadelphia - P Bethesda - P Oakland - P Long Beach - P San Diego - P Great Lakes - P Chelsea - P
Orthopedic Surgery	Brooke - P Fitzsimons - P Letterman - P Oliver - P Walter Reed - P	Chelsea - P St. Albans - T Philadelphia - P Bethesda - P Oakland - P Long Beach - P San Diego - P

SPECIALTY	ARMY	NAVY
Physical Medicine		
	Fitzsimons - T	
	Letterman - T	
	Walter Reed - P	
Ophthalmology		
		St. Albans - P
		Philadelphia - P
		Bethesda - P
		Oakland - P
		Long Beach - P
		San Diego - P
Otolaryngology		
		St. Albans - *
		Philadelphia - P
		Bethesda - P
		Oakland - P
		Long Beach - *
		San Diego - P
Pathology		
	Brooke - P	St. Albans - P
	Fitzsimons - P	Philadelphia - P
	Letterman - P	Bethesda - P
	Oliver - P	Long Beach - P
	Walter Reed - P	Oakland - P
	Gorgas - P	San Diego - P
	Army Institute of Pathology - P	
Plastic Surgery		
		San Diego - *
Radiology		
	Brooke - T	Chelsea - T
	Fitzsimons - P	St. Albans - P
	Letterman - P	Philadelphia - T
	Oliver - T	Bethesda - T
	Walter Reed - P	Great Lakes - T
	Gorgas - P (Diagnostic)	Oakland - T
		Long Beach - T
		San Diego - P



SPECIALTY	ARMY	NAVY
Thoracic Surgery		
	Fitzsimons - P	St. Albans - *
	Walter Reed - P	Chelsea - *
Urology		
	Brooke - T	St. Albans - P
	Letterman - P	Philadelphia - P
	Oliver - T	Bethesda - P
	Walter Reed - P	Oakland - P
	Gorgas - P	Long Beach - P
		San Diego - P
		Portsmouth - P
Contagion and Tuberculosis		
	Fitzsimons - T	
	Walter Reed - P	
Gastroenterology		
		Bethesda - *
Cardiology		
	Brooke - R	Bethesda - *
	Letterman - R	
	Oliver - R	
	Walter Reed - T	



APPENDIX C

PER ANNUM SALARIES OF RESIDENTS
on July 1, 1948

Agency	Salary From	Range To	Average Salary	% Earning Over $7000 (Approx.)
Army	$5,000	$9,000	$6,932	63
Navy	5,000	9,000	6,225	40
Veterans Administration[1]	2,400[2]	3,300[3]	3,300	-
Public Health Service Marine Hospitals	5,000	8,218	5,476	26
P. H. S. Hospitals	5,000	7,021	5,752	12
Freedmen's Hospital[4]	1,760	3,360	2,173	-

1/ The cost of subsistence and quarters is deducted from this salary when the resident resides at the station.

2/ Salary of junior, non-veteran residents, effective July 11, 1948.

3/ Salary of veteran residents of all grades.

4/ Includes allowance of $360 for maintenance.

APPENDIX D - DISTRIBUTION OF RESIDENTS BY SPECIALTIES
As of July 1, 1948, and planned for FY 1949

Specialty	Totals	Army		Navy			Public Health Service[a]		
		Army Hospitals[a]	Civilian Institutions[b]	Naval Hospitals[b]	Civilian Institutions	V A[a]	Marine Hosp's	USPHS Hosp's	Freedmen's Hospital
Anesthesiology	102	14	6	10	4	67	1	-	-
Children's Orthopedics	8	-	-	-	8	-	-	-	-
Dermatology	61	14	1	16	8	18	4	-	-
General Surgery	657	63	48	52	7	438	48	-	1
Internal Medicine	804	76	55	53	6	576	38	-	-
Neurosurgery	33	-	1	3	4	25	-	-	-
Obstetrics & Gynecology	94	18	35	36	2	-	-	-	3
Oral Surgery	1	-	-	-	-	1	-	-	-
Orthopedic Surgery	164	36	-	23	2	96	6	-	1
Ophthalmology & Otolaryngology	227	32	67	28	5	84	10	-	1
Pathology	121	22	16	22	7	48	6	-	-
Pediatrics	50	4	30	10	4	-	-	-	2
Physical Medicine	17	4	10	-	1	2	-	-	-
Plastic Surgery	5	-	-	1	1	3	-	-	-
Psychiatry and Neurology	491	49	26	19	16	357	7	16	1
Radiology	132	21	-	10	5	86	9	-	1
Thoracic Surgery	21	9	-	1	1	8	-	-	2
Tuberculosis	9	-	-	-	-	7	-	-	2
Urology	94	18	-	16	3	52	4	-	1
Miscellaneous[c]	33	1[c]	5	-	12[c]	-	-	-	15[d]
TOTALS	3,124	381	300	300	96	1,868	133	16	30

a/ On duty July 1, 1948 b/ Planned for fiscal year 1949

c/ Includes residents receiving specialized training in fields such as allergy, biophysics, cardiology, oncology, radiological defense, tropical medicine, and virus diseases.

d/ Includes eight Assistant Residents with rotating assignments in the specialties, six Assistant Residents with rotating assignments in general medicine specialties, and one Chief Resident in general medicine.

APPENDIX E

AUTHORIZED INTERNSHIPS AND RESIDENCIES

Fiscal Year 1949

Agency	Internships			Residencies		
	Total	Outside Institut.	Agency Hosp.	Total	Outside Institut.	Agency Hosp.
Army	600	300	300	802	300	502
Navy	550	250	300	425	125	300
PHS	176	---	176	179	---	179
VA	---	---	---	2500	---	2500
TOTALS	1326	550	776	3906	425	3481

APPENDIX F

APPROXIMATE COSTS OF EDUCATION AND TRAINING PROGRAMS FOR FISCAL YEAR 1949*
(Amounts in Thousands of Dollars)

Element of Cost	A Total	B Veterans Administration	C Army	D Navy	E Public Health Service
TOTAL COST					
1. Gross	31,192	11,551	12,348	5,897	1,396
2. Adjusted	21,577	6,851	9,059	4,900	767
RESIDENCY TRAINING					
Salaries					
3. Gross	16,602	8,000	5,083	2,646	873
4. Adjusted	9,492	4,000	3,343	1,712	437
Other Costs					
5. Gross	3,600	1,625	1,090	750	135
6. Adjusted	3,220	1,313	1,090	750	67
INTERN TRAINING					
Salaries					
7. Gross	5,233	---	3,000	2,125	108
8. Adjusted	5,233	---	3,000	2,125	108
OTHER POSTGRADUATE EDUCATION					
Tuition Costs	1,757	1,400	77	250	30
LECTURER'S FEES					
10. Gross	2,500	500	2,000	---	---
11. Adjusted	1,125	125	1,000	---	---
MEDICAL MOTION PICTURES					
12. Gross	1,500	26	1,098	126	250
13. Adjusted	750	13	549	63	125

* Explanation and qualifications on following pages.

[illegible]

[illegible]

[illegible]

APPENDIX F (continued)

NOTES ON LINE AND COLUMNAR ENTRIES

See pages 2 and 3 of paper to which this is an Appendix.

1. Line 3 Gross Salaries of Residents

   Column B. Product of annual salary of veteran residents and number of residents authorized for fiscal year 1949.

   Columns C,D,E. Product of estimated average annual salary and of number of residents authorized for fiscal year 1949.

2. Line 4 Adjusted Salaries of Residents

   Columns B & E. 50 per cent of gross costs of residents salaries.

   Columns C & D. 50 per cent of gross costs of salaries of residents in Army and Navy hospitals, plus full cost of salaries of residents in civilian institutions.

3. Line 5 Other Costs - Gross

   Column B. Estimate for fiscal year 1949. Includes tuition and travel costs for residents' affiliated training. plus cost fees for consultants and attendings supervising the residency training program.

   Column C. Cost of consultant services for Fiscal Year 1949 in Zone of Interior.

Column D. Included on Line 3, Column 10 (Other Postgraduate Education).

Column E. Cost of consultant fees in 11 teaching hospitals, fiscal year 1949.

4. Line 6 Other Costs - Adjusted

Column B. Includes full cost of affiliated training for residents plus one-half the cost of fees for consultants and attendings supervising the residency training program.

Column E. 50 per cent of costs shown in Line 5.

5. Lines 7 & 8 Gross and Adjusted Salaries of Interns

Product of average annual salary of interns and of number of interns authorized for fiscal year 1949.

6. Line 9 Other Postgraduate Education

Column B. Fiscal year 1949 estimate of travel and tuition cost for doctors, dentists, nurses and ancillary personnel, exclusive of residents.

Column C. Authorized tuition costs for fiscal year 1949, for doctors, dentists nurses and ancillary personnel, exclusive of residents.

Column D. Fiscal year 1949 estimate of tuition costs for doctors, dentists, and nurses, including residents.

Column E. Fiscal year 1949 estimate of tuition costs for all commissioned PHS officers, including residents.

Column_A. Integer in line A. Column_B. Integer in line A.

Column_B. Date of ordinance fore in it recorded here.

Fixed width text.

Line_C Column_A Column_B Column_C Column_D

Column_A. Integer full year of establishment in [illegible]
multiple mid-century expansion in [illegible]
[illegible] district.

Column_B. It must have of cache shown in line [illegible]

Line_D Column_A Column_B Column_C

Column_A. Integer count of [illegible] in [illegible]
of number of interim [illegible] for [illegible]

Line_E Column_A Column_B Column_C

Column_A. Fixed point 1940 decimal of [illegible]
cost for duration. Combined, nothing [illegible]
Permanent. Recommended [illegible]

Column_C. Nationhood [illegible] for [illegible]
for [illegible], [illegible] [illegible]
[illegible]. [illegible] of [illegible].

Column_A. Fixed point [illegible] [illegible].

7. Line 10 Gross Costs of Lecturers' Fees

Column B. Fiscal year 1949 estimate.

Column C. Fiscal year 1949 estimate for lecturers serving overseas.

Column D. Included on this Column on Line 5.

8. Line 11 Adjusted Costs of Lecturers' Fees

Column B & C. 50 per cent of gross costs of lecturers' fees.

9. Line 12 Medical Motion Pictures - Gross Costs

Fiscal year 1949 estimate for films to be produced through the Interdepartmental Committee on Medical Training Aids. Costs pro-rated on basis of each agency's share of fiscal year 1948 film production.

11. Line 13 Medical Motion Pictures - Adjusted Costs

50 per cent of gross costs of medical motion pictures.

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APPENDIX I

REPORT OF THE SUBCOMMITTEE ON PREVENTIVE MEDICINE AND PUBLIC HEALTH COMMITTEE ON FEDERAL MEDICAL SERVICES

Hugh R. Leavell, M.D.
James L. Troupin, M.D., Staff

November 1948

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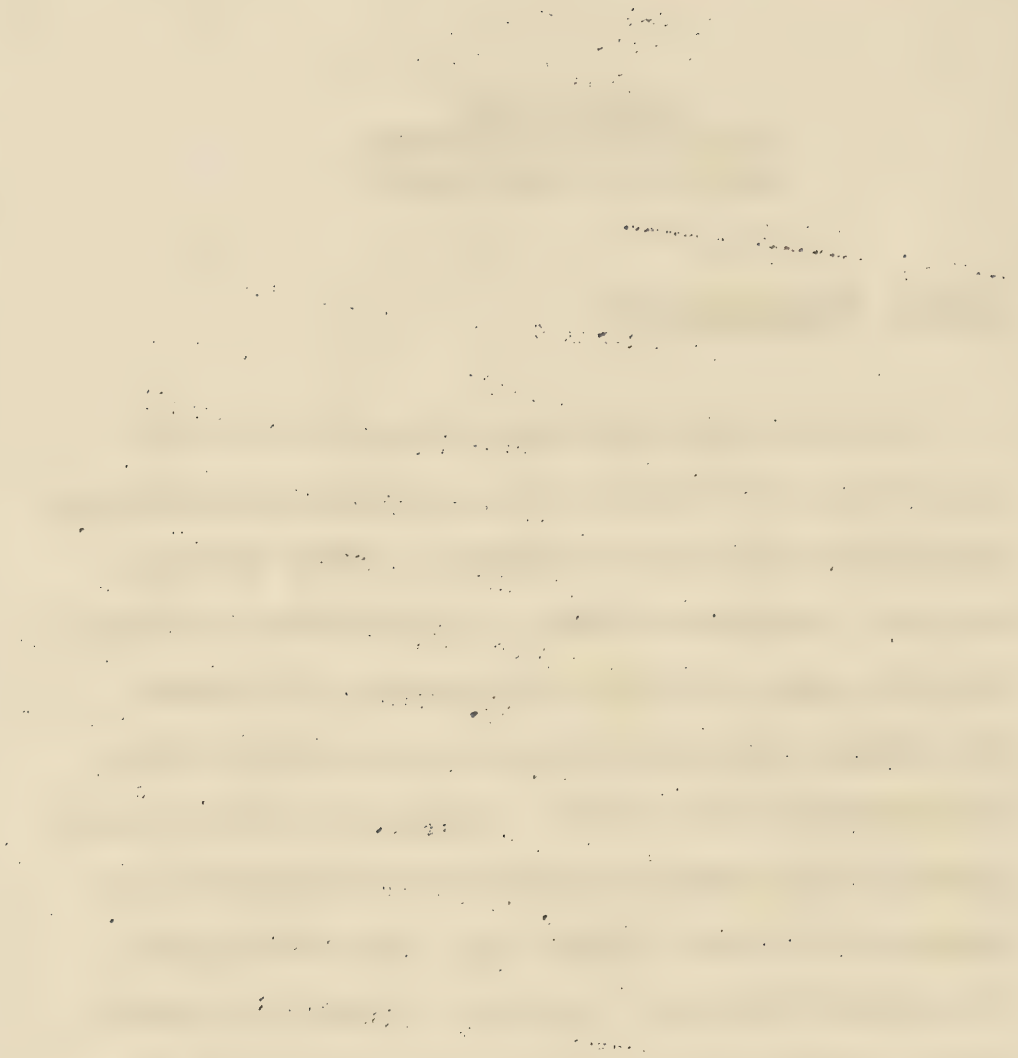
Recommendation 100

NOTE: The Subcommittee on Preventive Medicine and Public Health has worked cooperatively with the Brookings Institution and its report (Part II) on "Functions and Activities in the Field of Health" may be considered as supplementary to this report. Research and medical care by public health agencies are discussed in reports of other subcommittees.

REPORT OF THE SUBCOMMITTEE ON PREVENTIVE MEDICINE AND PUBLIC HEALTH

PART I. GENERAL SUMMARY

Compared with medical care, federal public health expenditures are relatively small, being only approximately 120 million dollars for the fiscal year 1948, excluding research. Eighty-three percent is spent within the Federal Security Agency, the Public Health Service (61 percent), the Childrens Bureau (18 percent), and the Food and Drug Administration (four percent). Outside the Federal Security Agency the meat inspection work of the Department of Agriculture is the largest single item. State aid comprises 68 percent of the total, regulatory activities 15 percent, training eight percent and other work nine percent. The following table summarizes the situation:



FEDERAL PUBLIC HEALTH EXPENDITURES[1]/
Fiscal Year 1948.
(In thousands of dollars)

BY TYPE OF ACTIVITY

ACTIVITY	AMOUNT	PERCENTAGE OF TOTAL
TOTAL	120,475	100.0
State Aid	81,594	67.6
Regulatory	17,860	14.9
Training	9,649	8.0
Other	11,372	9.5

BY AGENCY

AGENCY	AMOUNT	PERCENTAGE OF TOTAL
TOTAL	120,475	100.0
Federal Security Agency	99,638	82.7
Public Health Service	73,983	61.3
Childrens Bureau	20,839	17.4
Food & Drug Administration	4,816	4.0
Department of Agriculture	14,677	12.2
Department of Interior	2,717	2.2
Atomic Energy Commission	1,500	1.2
Department of Treasury	1,287	1.1
Other	656	0.6

1/ Medical care and research excluded. Figures given are "obligations" provided by the Bureau of the Budget.

Though much less confused than a few years ago at the time of the principal health agencies were placed in the Federal Security Agency, federal public health organization is not yet crystal clear. Jurisdictional disputes between agencies still occur, and some agencies have internal maladjustments. The major organization problems concern the Children's Bureau, the Public Health Service, the Food and Drug Administration and the Department of Agriculture.

A. CHILDREN'S BUREAU.

The history of the Children's Bureau has shown the great value of an agency with the broadest possible approach, so situated administratively as to be able to work for the best interest of the whole child in all areas of health, welfare and educational activity. Therefore, it should function as a staff unit directly responsible to the Secretary of Health, Education and Security and not have its functions split and united with the major component bureaus of the Department. It should conduct research directly and through grants; carry on training and demonstration programs; provide technical assistance to other federal agencies, state and local governments and voluntary agencies, and set standards. It would be administratively unsound to leave administration of grants for maternal and child health and for crippled children in the Children's Bureau indefinitely. In approximately three years these grants, which comprise integral parts of state and local health department programs, should be consolidated with other health grants in a special Grant Unit to be developed in the Public Health Division. It would be unwise to make the transfer sooner as the Public Health Division

will require some time to get its own grant program functioning effectively on the new basis recommended.

The Children's Bureau should operate with its own technical health staff rather than using the National Health Service personnel, and should make intensive efforts to develop individuals with very broad training and interests in health and welfare as well as education.

B. PUBLIC HEALTH SERVICE

The present Bureau of State Services will form the major nucleus for the new Public Health Division, becoming the Section of State and Local Health Services, and administering public health grants. Organization for grant administration should be clarified by concentrating administrative functions in a new Grant Unit and leaving technical problems of special fields to the Tuberculosis Unit, Venereal Disease Unit, etc. The mental hygiene hospitals should be transferred to the Medical Care Division and cancer control activities transferred from the National Cancer Institute. Operating branches such as Sanitary Engineering and Dentistry should be transferred from the Office of the Surgeon General.

C. FOOD AND DRUG ADMINISTRATION

The Food and Drug Administration should become the nucleus for a Regulatory Section which should also include the Biologics Control Laboratory now in the National Institute of Health and the Foreign Quarrantine Division now in the Bureau of Medical Services.

D. DEPARTMENT OF AGRICULTURE

The meat inspection service now in the Bureau of Animal Industry should remain there. It is a service operated by veterinarians trained in animal pathology and should be associated with related operations. The control of animal biologics should also continue in its present organizational location. Other activities of Agriculture relating to human health should be coordinated with general health work of the federal government, under the leadership of the Director-General of the Health Bureau.

E. COORDINATION

Numerous federal agencies quite properly carry on health activities which should not be transferred to the new Department of Health, Education and Security. Interest in health should be as broad as possible, but it is essential that responsibility for coordinating all federal health work be legally placed in the Director-General of the Health Bureau. He should be more concerned than anyone else in mobilizing the health resources of the whole nation for a concerted effort. Work in the fields of nutrition, mental health, environmental sanitation, industrial health, the health aspects of housing, health education and international health is carried on by various federal agencies and requires strong coordination by interdepartmental and interagency committees provided with proper secretariat. Such committees should assist in solving existing jurisdictional disputes over industrial health, milk inspection, hospital construction and stream poolution control. They should agree upon suitable divisions of work and prevent duplication and

contradictions in policies and educational materials. Problems of rural health and the health of migrant labor also demand approaches on a broad governmental front involving many federal agencies.

The technical health personnel required for health programs operated by non-health agencies should be assigned from the National Health Service to work under administrative direction of the agency to which assigned. Such assignments of commissioned officers from the Public Health Service to other agencies have demonstrated effectively the value of this coordingating mechanism.

The Association of State and Territorial Health Officers serves a very useful function in keeping the federal government aware of State and local health problems; and the National Advisory Health Council should also be continued with subsidiary councils functioning in special fields such as mental health and nutrition. The Health Bureau should play an active role in the National Health Council to maintain liaison with voluntary health agencies and there should be close relationships with professional organizations.

F. GRANTS-IN-AID

Federal grants in the public health field have prooven extremely useful. They have been to a great extent responsible for making full-time local health service available to more people, (37 percent in 1935 up to 72 percent in 1946). Instead of retarding, grants have actually stimulated greater financial participation by state and local governments in support of local health work. (Federal share of the cost of state and local health departments fell from 46 percent in 1937 to 29 percent in 1946.) Both quality and quantity of

public health workers throughout the nation have improved because of the training programs and federal insistence on the merit system. The great majority of states are now active in health fields which were being neglected in 1935.

Health grants are now administered in twelve different categories by three federal agencies. While the categorical approach has fostered new programs and enlisted support from interested groups, many local health officers have found it difficult to organize balanced health programs adapted to meet varying local needs. Only because the disease problems have been so great in relation to funds available for attacking them has the overlapping been as little as it has. It is recommended that grants be made on a much more general health basis and that further development of full-time local health units be fostered to provide the basic framework upon which the various special programs must be engrafted. The federal structure for administering grants needs simplification and decentralization with minimum supervision of the states consistent with sound planning and administration.

G. FIELD OFFICES

Maximum decentralization should be the policy, with field representatives authorized to transact business with the states. Representatives of the Health, Education and Security Bureaus as well as the Children's Bureau should have offices under the same roof if possible and work under a Regional Director for the Department who would be responsible for "housekeeping" administration, general coordination, and for supervising joint fiscal and merit

system audits in the region. Specialist consultants in the health field should be assigned to research or demonstration projects rather than to the Regional Office, but should be available on call. Ample travel funds should be available so that the central office may be kept in close touch with the regions and the regions with the field.

H. IMPORTANCE OF PREVENTIVE MEDICINE

Only with proper emphasis on all phases of the health program - promotion of health, prevention of disease, early diagnosis and treatment, and rehabilitation - will optimum results be obtained. As research develops new technics, they must be made available to the professional groups and the public through health education.

Generous support of the more constructive phases of the total health program will more than pay for its cost by reducing the need for medical care of illness and injury, as well as by increasing national productivity. Additional manpower will also become available if required for military service - more than 160,000 men in the present draft age are now alive because of the mortality decline during their lifetime. The federal government is thoroughly justified in applying intensive preventive measures of proven value to its medical care beneficiaries as a money-saving proposition, and since these beneficiaries make up one seventh of the total population, general health measures will produce more than simply benefits for the public.

The cost of illness to the nation is estimated at 35 billion dollars a year including only the direct costs of medical care and the loss in output due to disability of various types, without making allowance for losses due to premature death.

It is not feasible to attempt to point out the total amount of savings that might be possible if all known preventive measures were used as fully as we know how to use them at the present time. However, a few examples of what may be accomplished by preventive measures will suffice.

Industry - Employers report that a first class medical and safety department will reduce occupational disease 63 percent, absenteeism 30 percent, compensation cost 29 percent and labor turnover by 27 percent.

Armed Forces - Various types of vaccination, plus sanitation and D.D.T. made losses due to typhoid fever, smallpox, typhus, cholera, plague, yellow fever and tetanus negligible. Malaria was a minor problem within the U.S. and responded satisfactorily to vigorous control measures in the Pacific. Through X-Ray screening at induction centers 150,000 cases of tuberculosis were kept out of the armed forces, and the tuberculosis incidence among the forces and among veterans since the war has been only about one tenth that of World War I. Deaths from disease were a much smaller proportion of total deaths than in any previous war, with a 1:16 disease to battle death ratio in World War II; an approximately equal ratio in World War I and a 13:1 ratio in the Spanish War.

Cancer - If all the 334,000 new cancer cases each year had the best modern treatment in stages possible with early diagnosis we might anticipate about 200,000 five year cures contrasted with about 9,000 from the average type of treatment given after cancer becomes widespread.

Tuberculosis - Based on 1943 standards the annual cost of tuberculosis to the nation is estimated at 356 million dollars. If we were willing to spend only 31 million more each year for ten years, it is estimated that tuberculosis could be so reduced that only 37 million a year would be needed thereafter to keep it under control.

Malaria - The estimated 2 million cases a year cost some 500 million dollars. Based on control programs around military areas during World War II, it is stated that with 53 millions spent over seven years malaria could be virtually eradicated so that only a quarter million a year would be needed thereafter to keep it under control.

Maternal and Child Health - If the entire country had the infant mortality and maternal mortality rates of our best states, nearly 22,000 infants and 2100 mothers would be saved annually.

Life Expectation - At birth, life expectation for white females is now 70.3 years having increased steadily by over 25 years since 1890 due largely to control of communicable diseases and better infant care. However, expectation at age 50 is increasing only slowly because diseases of later life have not yet been greatly affected by preventive measures. Based on experience of other countries, it is not at all unreasonable to hope for three or four additional years expectation at 50.

If the 15 major causes of death during the productive period from 20-65 were completely eliminated, 178,500,000 years of productive life would be added for white males alone and life expectancy at 20 increased by 3.95 years. Some of the most important causes of death during this period are definitely amenable to preventive measures now available. A reasonably conservative estimate indicates that of the theoretically possible addition of 3.95 years, 1.95 could be achieved by full application of our present knowledge.

RECOMMENDATIONS

Generous support of preventive measures and those which promote health will reduce the costs of medical care for disease and injury.

As the wards of the federal government comprise one-seventh of the total population, expenditure of federal funds for general health promotion and disease prevention among the population as a whole will do more than produce general health benefits for the nation. Very considerable savings will result in the federal government's obligation

to its own wards for medical care.

Very intensive preventive measures are financially justifiable for federal wards. There is every reason to expect that expenditures for such measures will be repaid many times over by savings in medical care costs.

PART II. THE VALUE OF PREVENTIVE MEDICINE

Activities within the field of health encompass a very broad range of services which include the promotion of health; prevention of disease and injury; diagnosis and alleviation of disease and injury once they have developed; and the rehabilitation of those with handicaps which could not be prevented by proper treatment. The field was a much narrower one before research made new techniques available, and before through knowledge and action the professional groups and the public were supplied with the fruits of research which could be translated into programs for action. With medical care alone available a certain proportion of those seeking treatment could be cured, but the remainder continued round and round in a vicious circle. But in a balanced program research at the center contributes constantly to knowledge and makes action possible. Numbers of potential patients are spared the effects of disease and injury through measures to promote health and prevent disease. Those who develop disease in spite of this can expect a higher percentage of cures than ever before. And a quite considerable proportion of those not cured may be rehabilitated and enabled to return to work. Only a relatively small proportion of the whole group fails to receive benefit from any of the health measures available and continues in the vicious circle.

Only with proper emphasis on all phases of the health program will it be possible to obtain the best results. It is essential that medical care programs and medical research conducted by the federal

government be related closely to public health and preventive medicine activities. As research (basic, developmental and administrative) makes new procedures available, they must be incorporated into the practice of public health and preventive medicine. The people must have knowledge of what is available and must be induced to take action necessary to secure for themselves the benefits of modern medical science. Thus an increasing part of their heavy burden may be taken from the members of the health team engaged in diagnosis and treatment of disease. As time goes on we may expect that more and more disease will become regarded as a result of failure to apply the knowledge we have, rather than the result of bad luck.

A. MONEY SAVINGS BY INCREASING PREVENTIVE WORK AND REDUCING COSTS OF ILLNESS

It is extremely difficult at the moment to estimate accurately the amount of possible saving in the costs of illness that might be brought about by full use of all present knowledge of disease prevention. However, it is profitable to consider the question provided one realizes the difficulties and fallacies involved.

One cannot assign money value to health and productivity since there are intangible values which spur us to seek health even after age has made productivity unlikely. It is also unprofitable to attempt a complete separation of prevention and treatment since the one merges more or less imperceptibly into the other. The treatment of a case of syphilis in the communicable stage prevents transmission of the disease to others and at the same time reduces greatly the chances of late complications in the patient treated. The actual

statistics necessary to study the problem adequately are alos deficient, particularly the statistics of illness rates which are much less complete than those regarding deaths. We also do not have completely reliable figures on the actual costs of controlling disease to the irreducible minimum or even to any specified proportion of its present prevalence.

Certain of the costs of illness may be computed with reasonable accuracy, but others are bound to be indefinite. There are the direct costs of doctor's bills, medicines and hospitalization, plus the loss of wages during illness and the loss of potential earning power through premature death. Then there are costs more difficult to compute such as the loss to industry of having machines idle and the reduced productivity of other workers hampered by absence of the man who is ill.

Various measures to reduce the losses are available. Immunization can be used to actually prevent cases of certain diseases such as diphtheria. Useful treatment measures will reduce deaths (penicillin in pneumonia) even though cases cannot be prevented. In other diseases (diabetes-insulin; pernicious anemia-liver etc.) it is possible to reduce greatly the disability even though the disease itself continues. In other situations diagnosis in the early stages (tuberculosis, cancer) enormously improves the value of treatment. In still other cases the chain of disease spread from one individual to another may be broken by measures affecting the environment such as purification of water, proper disposal of sewage, pasteurization of milk, control of certain air-borne infections through measures to "sterilize" the air, and the control of insects which spread malaria typhus etc. by the use of D.D.T.

The total cost to the nation due to illness and injury has been estimated at 35 billion dollars annually. No attempt will be made to indicate how much of this amount could be saved if all known preventive measures were applied to the fullest possible extent, and if research were supported at the optimum level to make available new methods of prevention, health promotion medical care and rehabilitation as rapidly as possible. Unquestionably the results would be astounding. Examples of what might be accomplished in specific fields will be given, and they may serve as a sort of index of the possibilities.

B. SAVINGS DUE TO REDUCED SICKNESS AND ACCIDENTS IN INDUSTRY.

Employers who set up a good department of industrial medicine and safety can save its operating cost through improvement in operating efficiency of their plants due to reduced absenteeism from sickness and accidents. In addition, there is the clear gain to employees of the medical service received for sickness and injury occurring at the plant, plus the extra wages received due to their being able to spend more time on the job. 1/

Recently the National Association of Manufacturers asked about 2,000 plant operators what their savings were due to establishment of medical and safety departments. Essentially all

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1/ Brundage, D.K. -- An estimate of the monetary value to industry of plant medical and safety services Pub. H. Rep. 51:1145-59 August 21, 1936.

reported that the project was a paying proposition, and the following average percentage reductions were reported:[1]

Reduction in occupation disease	62.8%
Reduction in absenteeism	29.7
Reduction in compensation costs	28.8
Reduction in labor turnover	27.3

Preventive medicine for executives also pays dividends as shown by the experience of General Motors [2] which instituted an annual diagnostic examination for its "key" men because of concern over the high toll of illness and death among this group. Thirty percent of those examined had medical conditions urgently in need of treatment.

These are but a few examples of what may be accomplished by an aggressive industrial health program. The strength of the United States lies to a great degree in its extraordinary productive power. Obviously the federal government has a great interest in maintaining this power at its maximum, and is thoroughly justified in providing technical assistance necessary to help build up industrial health and safety programs.

1/ National Association Manufacturers of the U.S.A. -- Health on the production front, January 1944 and Industrial Health Practices, May 1941.

2/ Quoted from text of a radio talk prepared by the Statistical Bureau of the Metropolitan Life Insurance Company and supplied through the courtesy of that organization.

C. CANCER

A very recent study from Connecticut shows much hope for reducing cancer deaths if cases are discovered and treated early, which is the basis of the cancer control program at present. In Connecticut the educational program is showing results, for whereas only 16 percent of breat cancers in 1938 were treated without delay, this percentage rose to 46 percent in 1946.

As shown by the accompanying table, a large proportion of cancers are fairly accessible for doctor's examination, and in this group -- skin, mouth, breast, genitalia, etc. -- the proportion of cases that may be cured is quite high if treatment is given before the cancer has spread. The outlook for females is even more optimistic than for males, more than a third of females being cured by early treatment, whereas a fourth of males may be saved. Were the very best methods now available used in all cancer cases, we might even anticipate an average cure rate of 55 percent for males and 64 percent for females.

If we apply these figures to the nation's estimated population of 143,300,060 for 1948, the following table results:

RESULTS OF VARIOUS TREATMENTS FOR CANCER (THEORETICAL)
Number of Five-year Cures Depending on Type of Treatment, and State of Disease When Treated

	U.S. New Cancer Cases Annually	Optimum Care for All Cases	Average Type of Care		
			Early	Moderate Spread	Wide Spread
Total	333,890	199,503	102,861	47,676	8,626
Females	176,260	112,806	63,453	33,489	7,050
Males	157,630	86,697	39,408	14,187	1,576

Thus employing the best possible care with full use of modern knowledge of the importance of reporting to the doctor early, skillful diagnosis and the best treatment, will expect to save the difference between the 199,503 survivors of this type of treatment and 102,861 survivors from average treatment in the early stages of cancer. There is a difference of 96,642 lives that might be saved if all had the best care now known, (without waiting for results of research now under way or that we may be undertaking later). Contrasting the 102,861 survivors with early average treatment with the 8,626 that may be expected to survive with late treatment, we find a theoretical saving of 94,235; or if the two widest extremes of optimum treatment and late treatment are contrasted, there would be a saving of 190,877 lives each year.

While many cancers occur in older people, the percentage of cases under 50 years old in the Connecticut series was 20.1 for males and 33.8 for females. The group under 60 years old made up 44.5 percent of the male cases and 59.7 percent of the females. One may conclude fairly that a very considerable number of productive years may be saved by the widespread application of known cancer control methods. As research improves the results of treatment, the outlook will undoubtedly improve further.

NOTE: There are minor fallacies in applying the figures from Connecticut to the whole country because of difference in age distribution of population in the various states and certain other factors.

CANCER

NEW CASES ANNUALLY AND SURVIVAL RATE BY SITE AND SEX

- Connecticut -

Site of Cancer	New Cases Annually Per 100,000 pop., 7 Year Average		Percent of New Cases		Percentage of Cases Surviving 5 Years By Stage of Disease on Admission					
					Localized		Moderate Spread		Wide Spread	
	M	F	M	F	M	F	M	F	M	F
TOTAL	194.4*	221.2	100.0	100.0	25**	36**	9	19	1	4
Skin	23.5	17.3	12.1	7.8	39	48	21	29	3	0
Lip, mouth, Larynx	20.7	3.7	10.7	1.7	31	28	13	18	1	0
Breast	-	62.6	-	28.3	-	45	-	22	-	3
Lungs and Esophagus	18.7	4.2	9.6	1.9	4	4	2	0	0	0
Stomach, Intestines, Rectum	64.0	51.1	32.9	23.1	16	21	5	12	1	3
Genitalia	22.6	53.4	11.6	24.1	19	34	17	19	4	6
Other	44.9	28.9	23.1	13.1	-	-	-	-	-	-

SOURCE: MacDonald, E. J., "The Present Incidence and Survival Picture in Cancer and the Promise of Improved Prognosis", Bull. Am. Coll. Surg., June 1948.

* Note: Dorn, H. F., "Illness from Cancer in the United States", Reprint #2537, Pub. H. Rep. gives a cancer incidence rate of 246 for females and 220 for males.

** Note: The same author (Dorn) in a recent personal communication estimates that if "the best known skills and techniques at present are made generally available and that cases are discovered at an early age so that the maximum benefits from treatment are available" we might expect "an average cure rate of 55 percent for males and 64 percent for females."

D. TUBERCULOSIS

The National Planning Association[1] has estimated the annual direct and indirect cost of tuberculosis to the nation at 355.6 millions of dollars at 1943 standards. If we were willing to spend 387 million each year (only 31.4 million more than the amount we are already spending) for a ten year period it is estimated that the disease could be reduced to such a degree that only 37 million a year would be needed thereafter to keep it well under control, contrasted with the actual annual direct cost of 174 million. Thus, the annual saving which might be brought about by temporarily increasing expenditures for control would be 137 million, plus some 181.6 million which is the computed indirect cost due to loss of wages because of tuberculosis.

Some authorities question the possibility of eradicating tuberculosis, but there is general agreement that it could be reduced to a very low level through an active control campaign.

E. SYPHILIS

Effects of the relatively intensive efforts to control syphilis which have been made in recent years (very largely due to stimulation and financial assistance provided by the Public Health Service) are already discernible in lowered death rates from the disease. This reduction is all the more significant because there has been a tendency to report more syphilis deaths as due to their real cause in recent years than formerly.

1/ National Planning Association, Joint Subcommittee on Health, Good Health is Good Business, Feb. 1948.

SYPHILIS MORTALITY U.S. 1933-1946[1/]

	Deaths per 100,000 population			Infant Deaths per 1,000 live births
	Total	White	Non-white	
Average of 1943-45 incl.	11.4	8.0	39.5	0.26
Average of 1933-35 incl.	15.5	11.1	54.3	0.74

The reduction in total deaths amounts to about 27 percent, and in infant deaths due to syphilis there has been a 65 percent reduction.

The age at which syphilis deaths occur has become greater, which means that even though death from syphilis may not be avoided in all cases, the life expectation of a person with syphilis is increasing. By combining the effect of the lowered syphilis death rate and the increased age at death, comparing 1933 with 1944 and using life tables of 1930 and 1945, and computing figures only up to age 65, there was an increased life expectancy of 91.600 years in 1944.

MEDIAN AGE OF WHITE SYPHILIS DEATHS U.S. 1935-1944[1/]

	Median Age of Persons Dying from Syphilis		Increase	
	Male	Female	Male	Female
1944	57.2	54.4	4.4	5.4
1935	52.8	49.0		

1/ Kahn, H.A. & Iskrant, A. P., Syphilis mortality analysis J. Venereal Dis. Inf. 29:193-200, July 1948.

F. MALARIA

It is estimated[1] that there are at least two million cases of malaria annually in the United States, and that the disease cost the country 500 million dollars a year. During the last war intensive malaria control activities were carried on in areas around military camps at a cost of some ten million dollars a year. The results were brilliant as shown in the accompanying Chart 1, with a very much lower malaria rate among troops in the continental United States than was true during World War I. It is estimated that with seven years of intensive effort, costing a total of 53 million the disease could virtually be eradicated, and only about $250,000 a year would be required thereafter to keep it under control.[2]

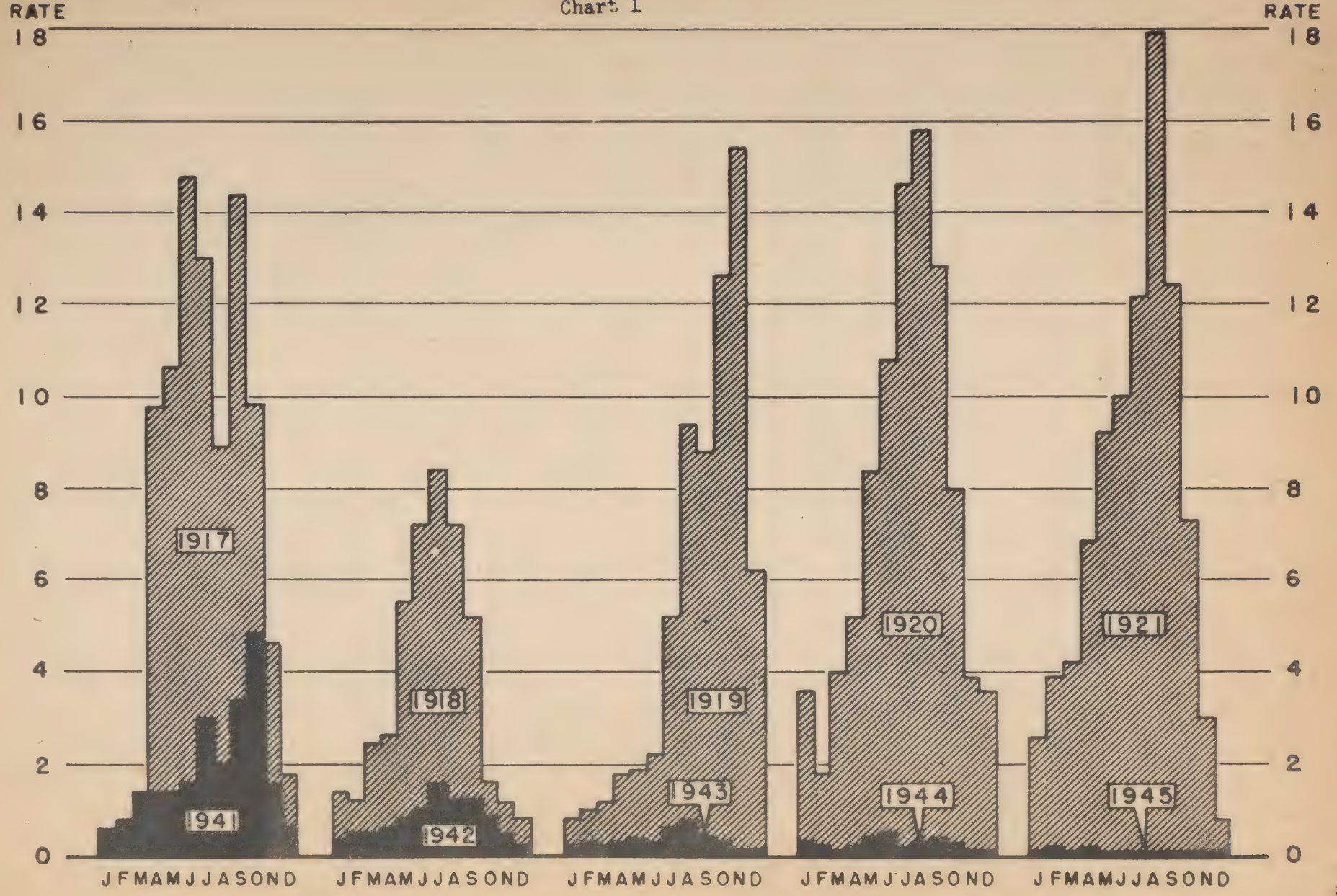
The effectiveness of preventive medicine in controlling malaria is brought out strikingly by the experience of the armed forces in the Pacific. During 1943 in the Southwest Pacific, the admission rate from malaria for Army troops rose to nearly 250 per thousand per annum and the rate in the Pacific Ocean Area was nearly as high. Peak rates were even higher. The effectiveness of anti-malarial measures was soon demonstrated by the drop in these rates to less than 50 per thousand.[3]

G. MATERNAL and CHILD HEALTH

There seems no biologic reason why the maternal and infant mortality rates in the states with the best records could not prevail

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1/ Williams, L.L. Jr. - Economic Importance of Malaria Control - Proc. 25th Annual Meeting - New Jersey Mosquito Extermination Ass'n. pp. 148-151.
2/ Personal communication - Division Public Health Methods, U.S.P.H.S.
3/ From General Somervell's report on the activities of the Army Service Forces for the fiscal year ending June 30, 1945.



MALARIA ADMISSIONS PER THOUSAND MEN PER YEAR FOR THE ARMY IN THE CONTINENTAL UNITED STATES. WORLD WAR I - WORLD WAR II.

in the other states of this country as well. If proper public health and medical care were available; if housing, sanitation, nutrition and general economic factors were favorable such a situation would doubtless prevail. On the assumption that the infant mortality rate in Utah of 27.2 deaths per 1,000 live births in 1946 had prevailed elsewhere in the United States, 21,611 infant lives might have been saved. Had the maternal mortality rate of 0.9 per 1,000 live births in Connecticut and Minnesota in 1946 been that for the country as a whole, 2,127 mothers' lives would have been saved.

PREVENTIVE MEDICINE IN THE ARMED FORCES

Probably no other large group has employed preventive measures appropriate to age and environmental conditions more effectively than the armed forces. A few examples will illustrate this fact.

1. Typhoid Fever Control

The increasing effectiveness of vaccine and sanitation in controlling typhoid and paratyphoid fevers is one of the most striking examples of what preventive medicine can accomplish. With no vaccination available during the Spanish-American War the typhoid-paratyphoid rate was approximately 300 times as great as during World War I. With constant improvement, the World War II rate was reduced to about one-seventh of that experienced in the first World War.

TYPHOID-PARATYPHOID AND DYSENTERY IN U.S. ARMY
WORLD WAR I AND WORLD WAR II
(Rates per 1,000 men per year)

	Typhoid		Paratyphoid		Diarrhea & Dysentery*	
	WW I	WW II	WW I	WW II	WW I	WW II
Total - Army	.37	.03	.05	.03	22.4	21.4
United States	.24	.007	.01	.006	17.8	9.1
Overseas	.53	.05	.09	.07	28.9	40.0

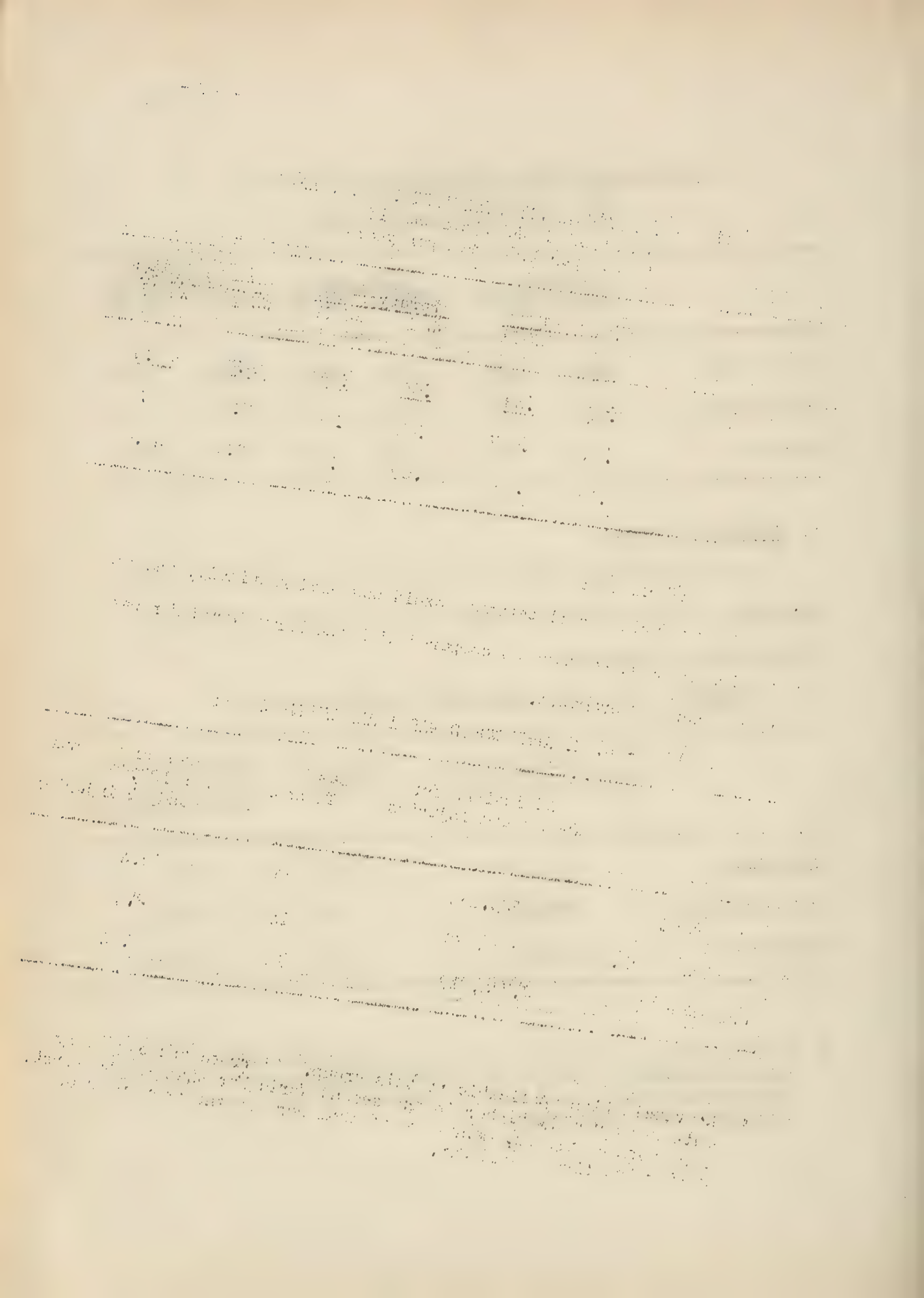
2. Tetanus Prevention

During World War II tetanus toxoid was used routinely, and the reduction in tetanus cases as compared with the First World War was nothing short of dramatic.

TETANUS - U. S. ARMY WORLD WAR I AND WORLD WAR II

	Admissions for Wounds and Injuries	Cases of Tetanus	Cases of Tetanus per 100,000 wounds & injuries
World War I	523,158	70	13.4
1920-1941 incl.	580,283	14	2.4
World War II	2,734,819	12	0.44

* No vaccination applicable to this group. Diarrhea and dysentery rate was actually higher in the second World War than in the first, for overseas troops, many more of whom were in the tropics than during the first World War.



3. Smallpox - Effectiveness of Vaccination

Vaccination against smallpox was compulsory during the second World War, but this was not universal during World War I,; the contrast is striking.

SMALLPOX CASES - U.S. ARMY - WORLD WAR I AND WORLD WAR II

	Number of Cases	
	World War I	World War II
Total	853	116
United States	780	10
Overseas	73	106

4. Typhus - (Epidemic Louse-borne)

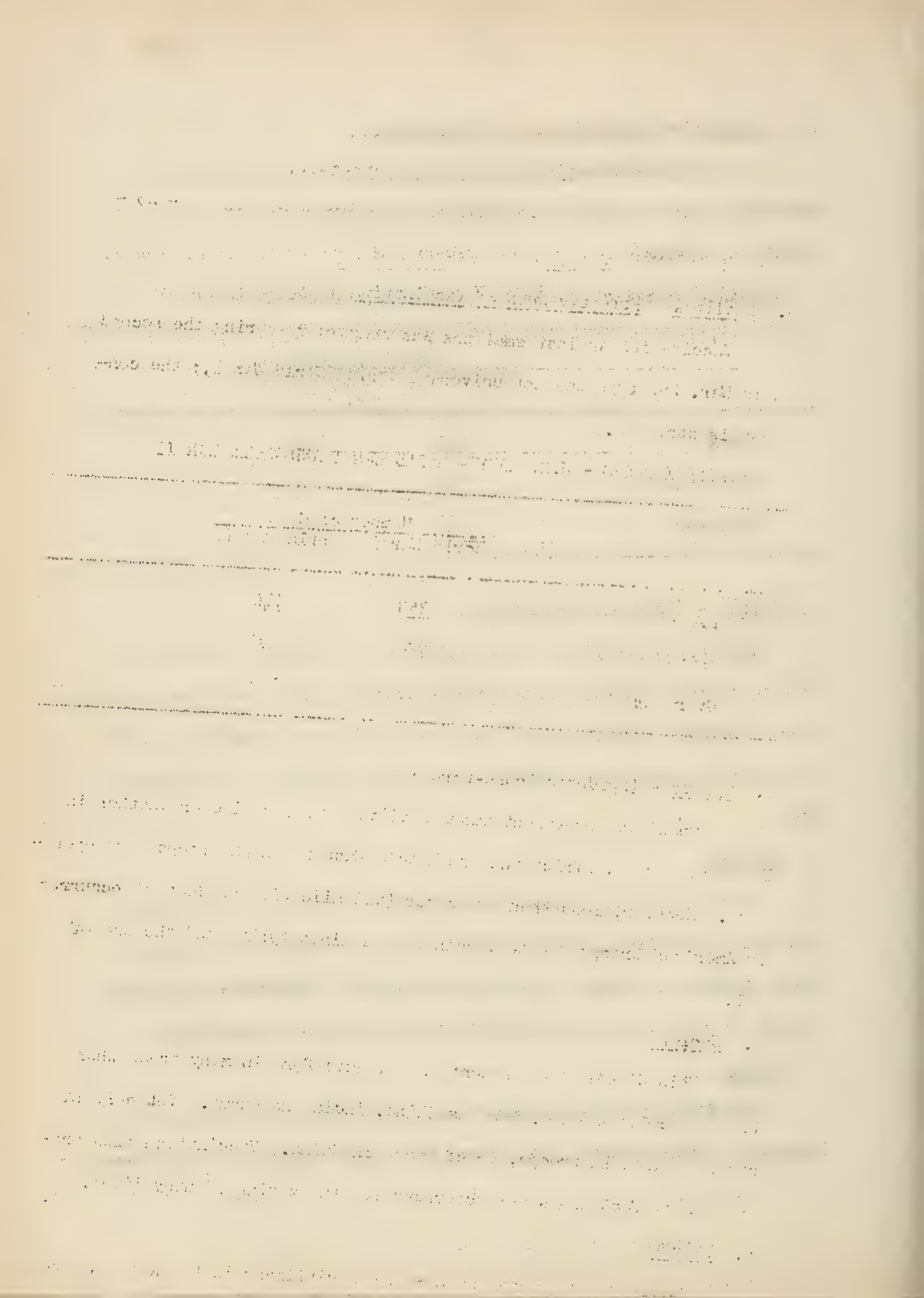
Typhus was prevalent among civilians at one time or another in areas of Europe, Africa and the Middle East in which troops were operating. However, less than 100 cases (all mild with no deaths) occurred in American troops due to vaccination against typhus and the use of DDT.

5. Cholera

This disease was present in epidemic form in many areas where troops were stationed, such as China, India and Burma. Yet only 14 cases occured in troops, 13 of these in China. Vaccination plus protection of food and water accounted for the saving of many lives.

6. Plague

Outbreaks of plague occured among civilians in the Azores, New Caledonia, Egypt, Senegal, China and India where troops were stationed.



Due to control measures including vaccination, no cases occurred among American troops.

7. Yellow Fever

The effectiveness of yellow fever vaccination was well demonstrated prior to adoption by the Army. No cases occurred among American troops. There was no great exposure to this disease, however.

8. Meningitis

In addition to a very greatly reduced case fatality rate from meningitis, it proved possible to actually prevent the spread of the disease among units of troops by giving sulfa drugs to reduce the carriers of meningococci. One report showed only two cases among 15,000 men giving sulfadiazine as a preventive measure, while among 18,800 controls not receiving sulfa there were 40 cases during the same period. Both the treated and the control groups had essentially the same percentage of carriers in their group at the outset of the experiment.

9. Malaria - Navy and Marine Corps

During 1941 the average monthly case rate/1,000/year was 1.2. In the first nine months of 1942 the average was 3.7, but between November 1942 and June 1943 the range was from 31.2-49.4. Repressive drugs were available during this period, but enforcement of recommendations that they be used regularly were lax. As soon as enforcement became strict and general, the malaria rate dropped, running between 10.7 - 17.2 during October 1943 - March 1944 and falling thereafter to a very much lower rate. The figures quoted are for Navy and Marine Corps as a whole; were they restricted to personnel actually in malarial areas they would be even more striking.

Malaria - Army

The Army figures on malaria within the continental United States during World War II are even more striking when compared with the World War I incidence of malaria (see Chart 1, page 22a).

10. Tuberculosis

Except in the early stages of World War II, candidates for induction into the armed forces were screened by X-rays to detect tuberculosis and nearly 200,000 cases were eliminated at induction centers alone. Already this procedure has proved extremely profitable to the federal government in reducing the number of tuberculosis cases both in the armed forces and among veterans.

TUBERCULOSIS IN ARMED FORCES - WORLD WARS I AND II

Peak Strength	Average Admission Rate for TB in Forces (per 1,000)	Average Annual Mortality Rate (Army) (per 100,000)	Average Mortality Rate - Civilian Corresponding age (per 100,000)	TB - Percent of all awards for disability
WW I				
4,200,000	11.8	66	150	15.2%(1923)
WW II				
14,361,000	1.0	7	48	1.5%(1947)

The official statistics of World War II show that only 4.5 percent of wounded died of their wounds (tetanus toxoid, blood transfusions, sulfonamides and penicillin, "preventive" surgical management). The over-all death rate from disease was given as 0.6/1,000/year, which is much lower than the civilian rate for the same age group. Communicable diseases such as smallpox, the typhoid fevers, typhus, yellow

fever, etc. which are largely preventable by vaccination were essentially unknown. Meningitis which had a case fatality rate of 38 percent in World War I showed a reduction to 4.2 percent with sulfonamides, and this was even lower with penicillin.

I. EXPECTATION OF LIFE

Life expectancy tables throw much light on public health programs of the past and on future problems. Figures for the United States before 1900 not being available, comparable figures for Massachusetts beginning in 1850 are used to supplement those for the United States in the accompanying chart and table. For the sake of simplicity consideration is restricted to white females. Other groups show similar trends.

1. Expectation of Life at Birth

During the 40 year period, 1850-1890, life expectation at birth increased from 40.5 at an average rate of only 0.1 year/year to 44.5. In the next 20 years the rate of increase quadrupled to 0.43 year/year rising to 53.1 in 1910. In the 36 year period, 1910-1946, the rate of increase was about the same, being 0.46 year/year with an expectation of 70.3 years attained in 1946. The greater part of this remarkable increase during the last fifty years has been due to bringing most of the acute communicable diseases under control and to reduction in infant mortality (the Massachusetts infant mortality rate in 1890 was 166.6; in 1946 it was 31.6).

A great deal of work remains to be done before it can be said that acute communicable diseases have been controlled even as well as

we know how to control them at present, not to mention the future possibilities research may disclose. And there is still much room for reduction of infant deaths. In both of these fields the law of diminishing returns will become operable, however, as soon as control measures are more uniformly applied in all areas of the country, especially the rural ones not now properly covered.

2. Expectation of Life at Age 50

Between 1880 and 1900 there was actually a slight reduction (1.9 years) in expectation at age 50. But from 1900-1946 life expectation for the woman of 50 has slowly increased at an average rate of 0.09 years/year - interestingly enough, about the same rate of increase as was taking place for infants at birth prior to 1890.

This slight degree of improvement indicates that progress in controlling diseases characteristic of later life such as most cases of heart and kidney disease, diabetes, cancer, etc. has been much slower than has been the case with "childhood" diseases. Obviously, there is a definite limit to how long life may be extended, but based on the experience of other countries three or four additional years expectation at age 50 is not unreasonable.

The need for research to provide better methods of controlling these "degenerative" diseases is enormous. Even so, we are by no means applying all our present knowledge and there is an enormous field for studies to develop the best administrative technics for doing this.

EXPECTATION OF LIFE - AT BIRTH AND AT AGE 50
White-Females

Expectation of Life (years) at	1850[1] Mass.	1878-82[1] Mass.	1890[1] Mass.	1893-97[1] Mass.	1901[1] Mass.	1910[1] Mass.
	Massachusetts 1850-1910					
Birth	40.5	43.5	44.5	46.6	49.4	53.1
Age 50		23.5	22.1	22.1	21.6	21.6

Expectation of Life (years) at	U.S. 1900-02[2]	U.S. 1909-11[2]	U.S. 1919-21[2]	U.S. 1929-31[2]	U.S. 1939-41[2]	U.S. 1946[3]
	United States 1900-1946 (Death Registration Area)					
Birth	51.1	53.6	58.5	62.7	67.3	70.3
Age 50	21.9	21.7	23.1	23.4	24.7	26.0

Sources:

1. Metropolitan Life Insurance Co. - Statistical Bulletin, December 1927.
2. Greville, T. N. E., "U. S. Tables and Actuarial Tables 1939-41", U.S. Government Printing Office, Washington, D.C.: 1946.
3. National Office of Vital Statistics, News Release, July 26, 1948.

There is value in examining the major causes of death during the productive period of life (age 20-65) to learn what might be achieved if deaths from these causes could by some means be eliminated completely. While this is obviously impossible, we may nevertheless gain an idea of the relative importance of these causes which can serve as a guide in planning public health control measures as well as research. The accompanying Table (p. 33) indicates that during 1945 3,325,000 years of working life were lost from the 15 major causes of death at ages 20-64. If these causes were all eliminated 178,500,000 years of productive life up to age 65 would be added for white males alone in the United States; and the life expectancy at age 20 would rise from the 1945 figure of 39.85 years to approximately 43.8.

Some of the most important causes of death during this age period are very definitely amenable to preventive measures now available. Certainly accidents may be prevented in large part; tuberculosis and syphilis may be controlled to a large extent. It is quite legitimate to assume that early treatment of the best quality now available would very materially reduce the deaths from cancer, diabetes, pneumonia, appendicitis, hernia and intestinal obstruction. It is perhaps uncertain how much reduction in suicides and in peptic ulcers may be anticipated from applied mental hygiene, but it would doubtless be considerable. Not a great deal could be promised in diminishing deaths from heart disease, intracranial disease and nephritis with our present knowledge, though it is quite reasonable to suppose that early diagnosis and careful treatment would produce measurable reductions.

POSSIBLE INCREASES IN WORKING LIFE EXPECTANCY AT AGE 20 THROUGH ELIMINATION OF MAJOR CAUSES OF DEATH AT AGES 20-65

	Expectation Factor	Possible Increase
Diseases largely preventable: (80%)		
Accidents	.81	
Tuberculosis	.44	
Syphilis	.06	
	1.31	1.05
Material Reduction Possible (40%)		
Cancer	.45	
Pneumonia & Influenza	.17	
Appendicitis	.04	
Hernia & obstruction	.03	
Diabetes	.06	
	.75	.3
Questionable Reduction (25%)		
Suicide	.17	
Ulcer	.07	
Biliary calculi	.01	
Cirrhosis liver	.07	
	.32	.08
Little Reduction Possible (10%)		
Heart disease	1.2	
Nephritis	.19	
Intracranial lesions	.18	
	1.57	.16
Total	3.95	1.59

It is then evident that with full use of modern knowledge and facilities we might confidently expect that the life expectation at age 20 up to age 65 could be increased by 1.59 years, and that 68,2 million years of working life would be added to the white males population in this age group.

EFFECTS OF ELIMINATING IMPORTANT CAUSES OF DEATH OF LIFE EXPECTANCY AND INCREASE IN PRODUCTIVE WORKING YEARS
White Males Age 20-65

	LOST YEARS OF WORKING LIFE Age 20-64 On account of Deaths (between 20 & 65) in 1945 from specified causes	INCREASED YEARS OF WORKING LIFE Age 20 to Age 65 Based on 1945 Experience and as increased through elimination of deaths from specified causes	INCREASED EXPECTATION OF LIFE TO AGE 65 at Age 20 Based on 1945 Experience and as increased through elimination of deaths from specified causes
Heart Disease	983,000	58,000,000	1.20
Accidents	783,000	33,500,000	.81
Cancer	363,000	21,500,000	.45
Tuberculosis	332,000	17,000,000	.44
Nephritis	151,000	8,500,000	.19
Intracranial lesions	148,000	9,000,000	.18
Pneumonia and influenza	141,000	7,500,000	.17
Suicide	133,000	7,000,000	.17
Cirrhosis of liver biliary calculi etc.	73,000	4,000,000	.08
Ulcers stomach & duodenum	57,000	3,000,000	.07
Syphilis	53,000	3,000,000	.06
Diabetes	51,000	3,000,000	.06
Appendicitis	32,000	2,000,000	.04
Hernia & intestinal obstruction	25,000	1,500,000	.03
15 major causes death at ages 20-65	3,325,000	178,500,000	

* Personal communication from Edward A. Lew - Metropolitan Life Ins. Co.

Preventive medicine as applied to the individual and his family and public health as applied to the community are integral parts of a balanced health program. Other activities included are health promotion, medical care and rehabilitation. All are supported by research and education. Only by support of all phases can the best and most economical results be achieved.

RECOMMENDATIONS

1. Generous support of preventive measures and those which promote health will reduce the costs of medical care for disease and injury.
2. As the wards of the federal government comprise one-seventh of the total population, expenditures of federal funds for general health promotion and disease prevention among the population as a whole will produce more than general health benefits for the nation. Very considerable savings will result in the federal government's obligations to its own wards for medical care.
3. Very intensive preventive measures are financially justifiable for federal wards. There is every reason to expect that expenditures for such measures will be repaid many times over by savings in medical care costs.

PART III. FEDERAL AGENCIES WITH IMPORTANT PUBLIC HEALTH FUNCTIONS.

Three departments of cabinet status and four major independent agencies have important public health activities. In the order of their importance in a total view of the public health and preventive medicine activities of the government, they are:

Federal Security Agency
Department of National Defense
Department of Agriculture
Department of Interior
Federal Works Agency
Tennessee Valley Authority
Veterans Administration

A. FEDERAL SECURITY AGENCY

The Federal Security Agency, created by Executive Order in 1939 (Reorganization Plan I) , presently includes seven major units related to the promotion of health, education and social and economic security. Four of these units have functions directly relating to health, namely, Public Health Service, Children's Bureau, Food and Drug Administration, and the Office of Vocational Rehabilitation.

1. Public Health Service. Within the Public Health Service there are four major bureaus, namely, Bureau of State Services, Bureau of Medical Services, National Institutes of Health, and the Office of Surgeon General.

Administration of the federal-state cooperative health program and operation of Public Health Service activities which complement and strengthen that program, are the major responsibilities of the Bureau of State Services. Grants-in-aid to states

for general public health work, venereal disease control, tuberculosis control, industrial hygiene and hospital and health center construction are handled entirely by the Bureau. Grants for cancer control and mental health are joint responsibilities with the National Cancer Institute and the Mental Hygiene Division, Bureau of Medical Services. Plans for grants for dental health and for the heart program are just getting under way and will likely be organized as joint responsibilities with the Office of Dentistry (Office of the Surgeon General) and the National Heart Institute.

Interstate quarantine and certain emergency health and sanitation activities (Philippine Rehabilitation, Alaska Sanitation and Health Program) are also Bureau activities.

Developmental and administrative research is carried on, designed to strengthen and improve the nation's public health practice. Some training, especially of technicians, is done directly at the Communicable Disease Center, Atlanta; and the whole field of training of public health workers of all types is an important interest.

Much of the federal-state program administration is decentralized to the district offices where specialists in hospitals, tuberculosis, venereal disease, cancer control, health education and the like are assigned to provide consultation service to states and to actually administer major aspects for the work of their respective divisions. Real criticism of these specialists has been made, some of it justified, that they are not adequately trained and qualified in the specialty to which they are assigned, but are rather "specialists by declaration". Since they are called upon to consult with men who may have worked in

the special fields for many years, it is highly important that they be qualified to give sound technical advice.

The States Relations Division, the general public health practitioner of the Bureau, administers the general health grants-in-aid and supervises certain aspects of the technical training of public health personnel employed by state and local agencies.

Demonstration programs are carried on in cooperation with selected health departments and other agencies to explore and perfect new disease control techniques, and to train health workers in their operation. Such demonstrations are currently being conducted to determine the best methods of applying fluoride to prevent dental caries; evaluating heart disease diagnostic apparatus and developing a public health heart disease control program; developing similar diagnostic and control plans for diabetes; studying the nutritional status of population groups and for record-keeping in health departments.

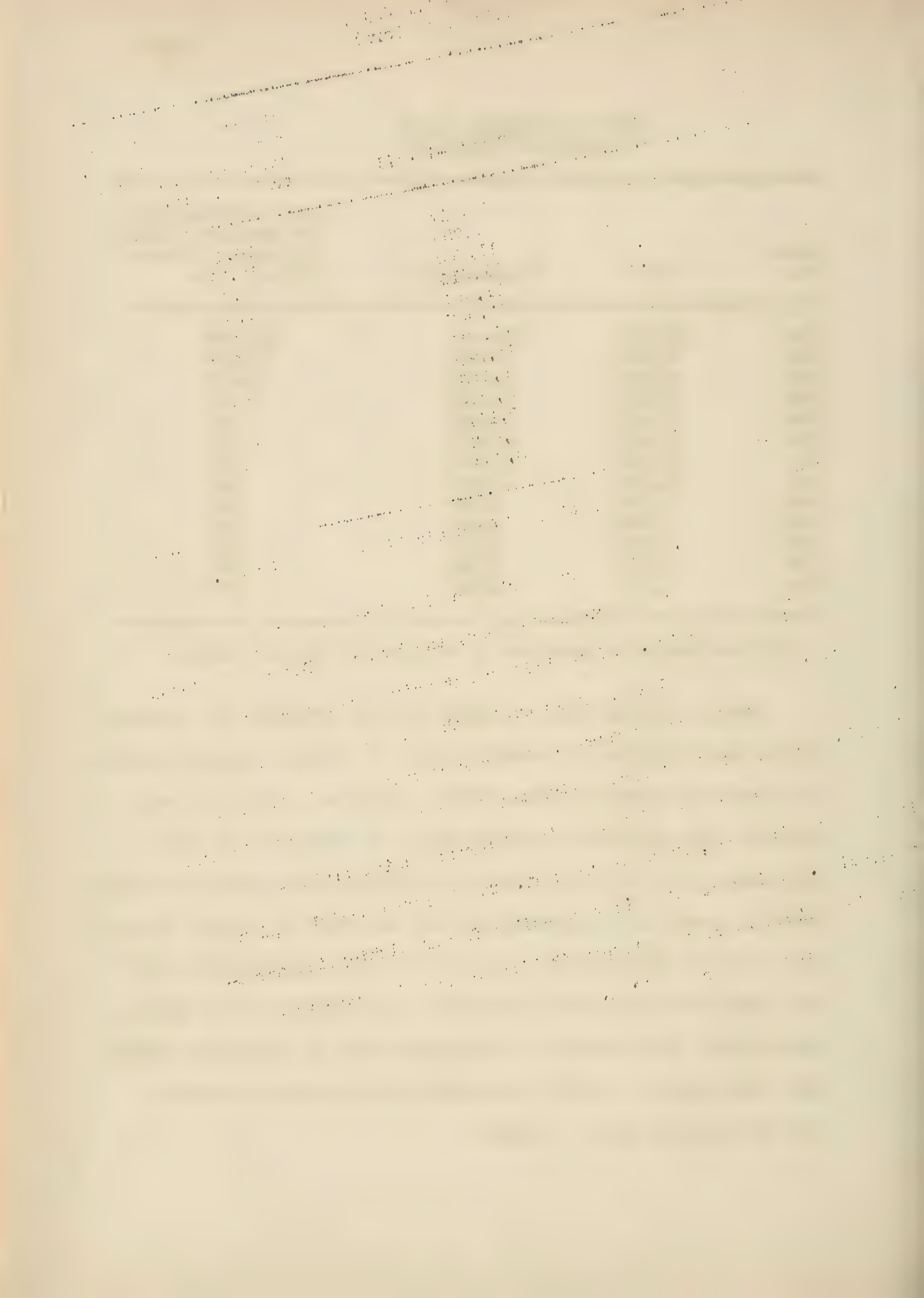
The development of full-time, well-balanced local health units is promoted, public health surveys are planned, and the Division plans the annual conference of state and territorial health officers, which is advisory to the Surgeon General.

FUNDS FOR GENERAL HEALTH
(Thousands of Dollars)

Fiscal Year	Total	Grants-in-aid	Direct Expenditures for Research, Demonstrations, Administration, etc.
1948	$21,405	$11,217	$10,188*
1947	22,260	11,750	10,510*
1946	13,478	11,000	2,478
1945	12,640	11,614	1,026
1944	12,426	11,454	972
1943	11,479	11,027	452
1942	12,005	11,500	505
1941	11,764	11,222	542
1940	10,166	9,723	443
1939	8,602	8,208	394
1938	9,510	9,117	393
1937	9,276	8,882	394
1936	3,711	3,333	378

* Includes funds for operation of Communicable Disease Center.

From the period following World War I to 1939 when the venereal disease grant program was re-established, the Venereal Disease Division was relatively inactive. Since 1939 an extensive program has been fostered, with particular emphasis during the recent war on close cooperation with the armed forces. The director represents the Federal Security Agency on the Interdepartmental Committee on Venereal Disease, which also has representation from the Veterans Administration, the Navy, Army, Air Force, State Department, and American Social Hygiene Association. This Committee is responsible for an eight-point agreement which helped to clarify responsibility of agencies concerned with the venereal disease problem.



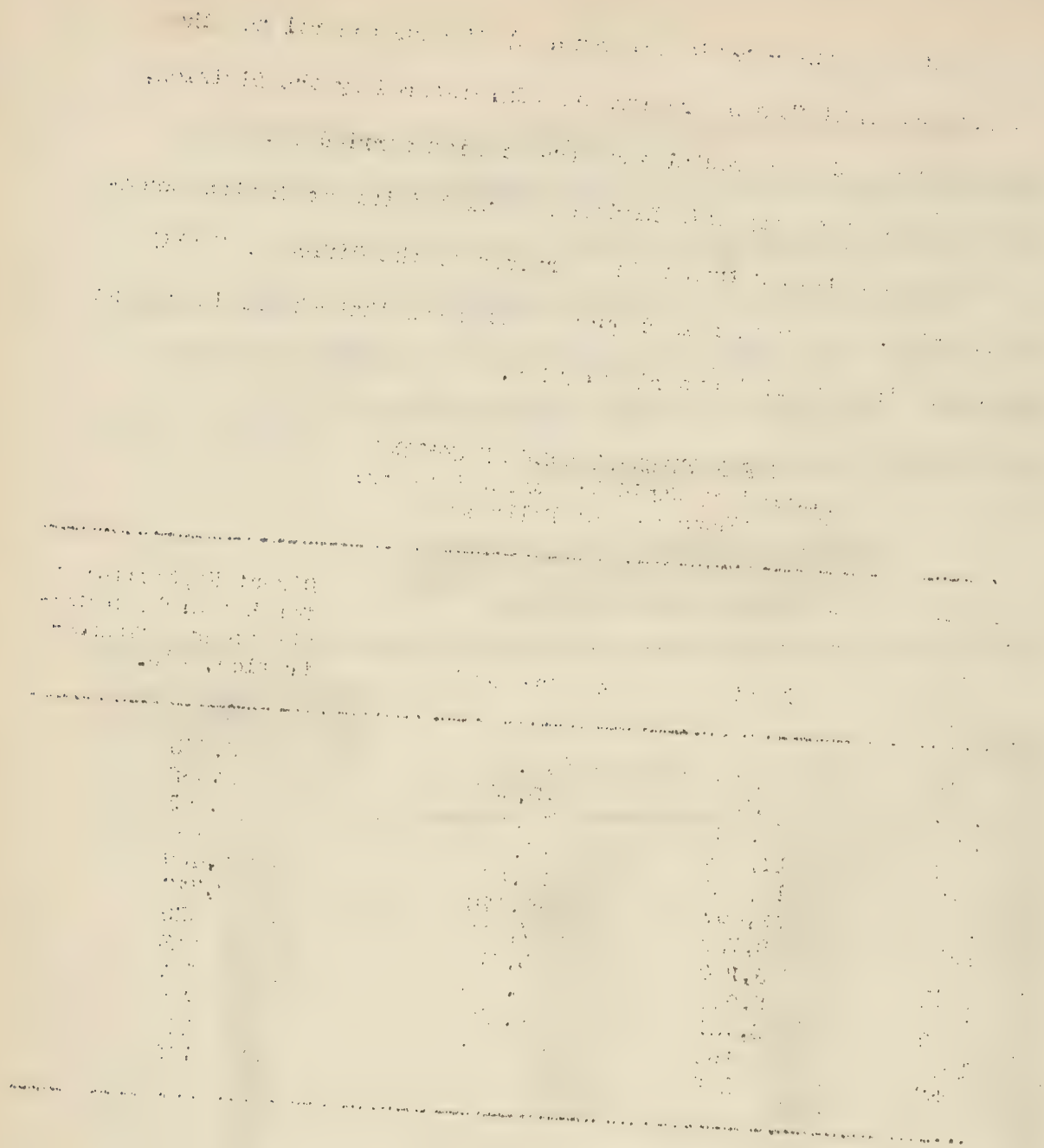
State grants-in-aid for venereal disease control and the Rapid Treatment Center program are administered by the Division, and a strong developmental research program carried on.

Until recently this Division conducted its own health education program rather than using services of the Office of Health Education. The rather inadequate reason was that the field was new and required special experimentation.

FUNDS FOR VENEREAL DISEASE CONTROL
(Including Rapid Treatment Centers)
(Thousands of Dollars)

Fiscal Year	Total	Grants-in-aid	Direct Expenditures for Research, Demonstrations, Administration, etc.
1948	$16,217	$13,954	$2,263
1947	17,508	15,446	2,062
1946	15,525	12,522	2,003
1945	14,983	12,247	2,736
1944	12,735	10,276	2,459
1943	12,497	10,170	2,327
1942	8,750	7,817	933
1941	6,200	5,672	528
1940	5,046	4,379	667
1939	3,157	2,400	757
1938	168	-	168
1937	142	-	142

The diagnosis, prognosis, treatment, control and prevention of tuberculosis are the concern of the Tuberculosis Control Division, particularly as related to state and local programs. Operations are conducted through offices for administration, state aid, radiology, and field studies.



Close liaison is maintained between this Division and tuberculosis consultants to the armed forces, Veterans Administration, Office of Indian Affairs, Bureau of Prisons, the National Tuberculosis Association and other voluntary agencies and professional societies.

The tuberculosis grant-in-aid program began in 1944 and has expanded rapidly with major emphasis on case finding. There has been some criticism of this very great emphasis, pointing out that demonstrations of a general program of tuberculosis control might have been more effective in the long run. However, large numbers of people have been reached by the case-finding program within a comparatively brief period. No funds are available for medical care of patients. This is an expensive portion of the total control program, and one which may well be left largely to state and local communities for the present except for legal beneficiaries of the federal government.

FUNDS FOR TUBERCULOSIS CONTROL
(In Thousands of Dollars)

Fiscal Year	Total	Grants-in-aid	Direct Expenditures for Research, Demonstrations, Administration, etc.
1948	$8,343	$6,790	$1,553
1947	8,441	6,880	1,561
1946	6,486	5,200	1,286
1945	2,347	1,370	977
1944	231	-	231

Occupational disease control and health promotion among industrial workers are the objectives of the Industrial Hygiene Division. Field studies and laboratory investigations are made on specific health problems and the results are used to set standards. Medical, engineering, chemical, dental and nursing sections provide consultative services to states and to industry in their respective fields. From funds for general health grants, a million dollars annually is set aside for assistance to states for industrial hygiene, and through such grants the Division has encouraged development of medically supervised industrial health programs in state (and some local) health departments.

A more detailed discussion of industrial hygiene activities appears in Part IV of this report.

The Hospital Facilities Division was established to implement the Hill-Burton Hospital Survey and Construction Act of 1946. Provision was made by the act for each state to survey its needs for hospitals of various types and for health centers, and to develop a coordinated plan for future construction and for regional integration of the facilities.

The job is a much broader one than simple construction alone, involving complicated studies of community medical care needs and resources and the development of standards to insure full utilization of best modern practices in the design and construction of the buildings. Individual communities actually make the contracts, so that federal participation involves paying one-third of the cost and seeing that standards are followed. Since the program is not one of federal construction, the Federal Works Agency is not involved.

Operations are carried on through five offices for administrative management, planning, program operations, technical services, and hospital services.

In the district offices of the Public Health Service, a physician, a "hospital representative", an architect, and engineer are assigned. In areas where private hospital architects are few or non-existent, it has been necessary to provide a more elaborate district organization than in other sections.

FUNDS FOR HOSPITAL FACILITIES
(In Thousands of Dollars)

Fiscal Year	Total	Grants-in-aid	Direct Expenditures for Research, Demonstrations, Administration, etc.
1948	$7,324	$6,396	$928
1947	1,079	371	708

The program provides no federal funds for hospital operation. These must come from the community. Much of the new construction fortunately is at present in rural areas and smaller towns where the needs are greatest. Many such places are able to secure funds for hospital operations during boom times which may not be available in periods of financial stringency. This is something which the federal government may have to face in the future.

The Bureau of State Services also includes:

1. The Office of Health Education, which is responsible for technical supervision of educational phases of all field programs of the Bureau of State Services, acts as consultant on health education to other units of the Public Health Service. A more detailed discussion appears in Part IV of this report.

2. The Office of Public Health Nursing, which provides general supervision over all nursing operations carried on by the Bureau of State Services, serves as consultant on public health nursing problems; assigns nurses to work in other divisions; conducts an annual survey of public health nurses in the United States; and works closely with national and state agencies concerned with public health nursing problems.

3. The Communicable Disease Center, which assists state and local health authorities in their communicable disease control problems, especially those spread by animals and insects, evaluates practical control methods such as the uses of DDT; studies and develops control equipment. Teams of experts with mobile equipment are available to investigate disease outbreaks when requests for such assistance come from the states. Field training is provided for public health personnel, and audio-visual aids are produced for training purposes at the Center and in other educational programs. As an example, film strips are now being produced for use in medical school preventive medicine courses.

2. The Children's Bureau. During its thirty-seven years of operation the Children's Bureau has developed services in those areas in which the interests of children need protection, such as children living under improper home conditions, juvenile delinquents, crippled children, children working in industry, and children in need of health care not otherwise available. It has been responsible for legislation to protect children. In addition, there has been a broad program of maternal health. It has a research program but is not authorized to make research grants to institutions or individuals. Under Title V of the Social Security Act, grant-in-aid programs are administered for maternal and child care, for crippled children, and for child welfare services. Total obligations for health activities in 1948 were $20,869,965 of which more than twenty million was for state grants.

When the Children's Bureau was in the Department of Labor, it enjoyed a remarkable degree of autonomy with the Chief being directly appointed by the President. At present, the Bureau is administratively under the Social Security Administration and the Chief does not have direct access to the Federal Security Administrator. This arrangement makes it administratively difficult for the Bureau to perform its assigned functions of concerning itself with all the problems of children, of developing plans to meet these problems, and, in general, making sure that children are considered in all the planning of the Federal Security Agency.

RECOMMENDATIONS

In order to perform its broad functions properly, the Bureau should be placed in the organization of the proposed Department of Health, Education and Security in a general staff capacity where it can advise the Secretary of the new department as well as the Directors-General of health, education and security.

The Bureau's activities need to be broadened somewhat beyond their present fields so that the Bureau may be equipped to deal more adequately with problems in education.

The Children's Bureau should have funds available for making research grants. It is most important that the Bureau be in a position to support research in the field of children's problems, in addition to carrying on direct research.

As soon as the Public Health Service develops a more unified approach to the administration of its own grant-in-aid programs, and as soon as the promotional phase is passed in the grant-in-aid programs now operated by the Children's Bureau, the health grant-in-aid programs should be transferred to the section of State and Local Health Services in the proposed Bureau of Health.

The grant-in-aid programs for which the Children's Bureau has been responsible have been administered admirably. Tremendous strides have been made in making maternal and child health available to people, though much remains to be done. Nevertheless there is no unanswerable reason for leaving the grant-in-aid programs indefinitely with the Children's Bureau. Its primary functions should be those of research, planning and promotion. A large administrative

responsibility is inconsistent with the maximum performance of the Bureau's proper functions. Unquestionably, funds should be available for demonstrations, for training personnel and for research conducted on a direct and a grant basis.

3. Food and Drug Administration. The Food and Drug Administration in the Federal Security Agency is concerned with protection of the consuming public against misbranded or adulterated foods and drugs, including cosmetics and related substances sold in interstate commerce. Certain research dealing with regulatory functions is carried on. Biologics for human use are regulated not in the Food and Drug Administration, but by the National Institutes of Health. The power to control misleading advertising of foods, drugs and cosmetics lies in the Federal Trade Commission.

The Food and Drug Administration should be transferred to the Bureau of Health in the proposed Department of Health, Education and Security as it is essentially designed for the protection of health. It should be the nucleus of a unit of Health Standards and Inspection.

The control of biologics for human use should also be transferred from the National Institutes of Health to the unit of Health Standards and Inspection.

The control of advertising relating to foods, drugs and cosmetics should be transferred from the Federal Trade Commission to the Food and Drug Administration. The control of advertising is quite as important as proper labeling in regulatory activities of this type, and the two functions are intimately related.

4. Office of Vocational Rehabilitation. The Vocational Rehabilitation Act (Public Law 113, 78th Congress) provides for the promotion of vocational rehabilitation of persons disabled in industry or otherwise through the granting of money to states whose plans are approved.

The law specifically provides for a state board of vocational education to administer the state plan and requires a state merit system and special reports. The extent of state financial participation is specified, differing for several categories of persons, such as one-half for all eligibles, except war-disabled civilians or civil employees of the United States for whom the federal government pays all the expenses. The medical aspects of the program are handled by an assigned staff of Public Health Service officers.

In summary, the Office of Vocational Rehabilitation provides funds which assist states in training, treating (medically), and placing in employment handicapped individuals who are of employable age and otherwise competent to work. The appropriations for the past two years have been $18 million per year, and in the 1947 annual report the amount of $400 was estimated as the average cost per restoration. It was calculated, too, that the annual income of those who were returned to employment increased from $14 million to $68 million, resulting in an increase in the national annual earned income of $54 million. From a cold statistical viewpoint this would seem to justify the program, but the increased happiness and psychological self-sufficiency which result from the return of a disabled person to gainful employment cannot be expressed in money values. These are perhaps incalculable.

Because medical service is but a small part, financially, of the total rehabilitation cost, it would be unwise to suggest separation of the medical service program from the other aspects of vocational rehabilitation at the federal level, especially since the federal activities involve grants rather than direct service. Strong arguments might be made for state administration of the medical services by the agency administering the program for crippled children.

B. NATIONAL MILITARY ESTABLISHMENT

The Departments of Army, Navy and Air Force each has a preventive medicine division serving in essentially similar roles in each branch of the armed services. All of these preventive medicine divisions recommend policies, standards and procedures for the control of disease, particularly communicable disease, insect and pest control, sanitation and industrial health. None of them has important operating functions; all serve in a staff capacity. The size of the preventive medicine divisions has been markedly curtailed since the close of World War II.

1. Army Preventive Medicine Division. This division operates under the Surgeon General and it is divided into branches for laboratory, infectious disease, nutrition, environmental sanitation, and medical intelligence. The Division is staffed with six Army medical officers, one Army entomologist and one Army sanitary engineer. There are two civil service technical people in the Division; one serving as Assistant Chief of the Laboratory and the other as Chief of Medical Intelligence. Both these were Army officers during the last war.

Research activities for the Army in the preventive medicine field are conducted largely by the Army Epidemiological Board, now administered by the Research and Development Board. This arrangement works quite satisfactorily.

The Army has a definite policy of sending officers to schools of public health for training. During the pre-war years, this was done at the rate of about two to four per year. Since the war the number of men trained in public health schools has increased markedly to between 10 and 20. Most of these men so trained have been kept in preventive medicine work rather than being assigned to non-related duties. There is one in each of the six Army areas in the United States. Men are also assigned to the Army in Japan, Germany, Korea, Okinawa, etc., and to civil government in Japan and Germany. Some of them are assigned to work in foreign ports.

The actual operating work in preventive medicine is the responsibility of medical officers assigned to various Army areas and units under the direction of the commanding officer.

2. Navy Division of Preventive Medicine. This Division is set up in the Bureau of Medicine and Surgery under the direct supervision of the Assistant Chief of the Bureau for Research and Medical Military Specialties. There are divisions for research, atomic defense, special weapons, and preventive medicine. Under the Preventive Medicine Division there are branches for communicable disease control, quarantine liaison, and sanitation and health.

There are five medical officers in the central Preventive Medicine Division; four additional doctors work in the communicable disease epidemiological unit, investigating epidemics as they arise, and carrying on various kinds of research in the interim. At the Naval District level the general medical officer has a non-medical man assigned to him to carry on preventive medicine activities.

The Navy has sent about eight men per year to schools of public health on a voluntary basis. Not all of these men have been kept in preventive medicine work in the Navy.

The Navy is particularly proud of the results of tetanus toxoid immunization done in 1941. Early in the war, the Navy began pre-induction X-rays for tuberculosis and this was placed on an annual basis for all men in the Navy beginning in 1944 and 1945.

3. Air Force Preventive Medicine Division. There are only two men in this Division; the Chief and a sanitary engineer. The Air Surgeon exhibited a great deal of interest in the discussion of preventive medicine activities of the Air Force.

a. Communicable Disease Control and Sanitation: Here principles developed by the Surgeon-General of the Army are followed in most instances. The Air Force is given opportunity to comment on proposed new policies before they become effective and may either concur or not as seems appropriate. Certain special problems peculiar to aviation medicine such as the disinsectization of planes and problems relating to personnel engaged where no Army or Navy forces are operating are handled on a separate basis by the Air Force. The immunization requirements are identical with those of the Army. There are some difficulties at the present time in getting morbidity figures

separate from the Army figures.

b. Industrial Medicine: Seven depots are maintained at present by the Air Force, carrying on engineering and supply functions and employing from 1,500 to 9,000 employees each. Here the program is to provide a hygienic working environment on the job, medical service for all civilian employees and education of personnel on employment hazards, accident prevention and proper health habits. Civilian physicians are used in cases where there are many civilian employees.

c. Aviation Medicine: Aviation medicine itself is said to be essentially preventive, and the importance of having medical officers familiar with flying conditions is considered great. The development by the Air Surgeon's office of body armor in the European theatre of operations shows an actual record of having saved 500 crewmen of planes operating in this area. The ditching procedure developed by the Air Surgeon for planes having to land in the North Sea and the English Channel may also be cited. The problem of frost bites was also one which engaged the attention of the medical service. Mental health problems were handled by the development of 40 rest homes on English estates where men were sent for a one week's period of rest as soon as premonitory symptoms of battle fatigue developed. It is pointed out that medical officers needed to actually live with the men in order to be able to detect these premonitory symptoms at an early time when rest treatment would be made most effective. At present a civilian commission is outlining criteria for the diagnosis of combat fatigue and is developing suggestions regarding methods for handling it.

The Air Force has trained six men in schools of public health since the war; only three now remain in the Force, including one teaching at the school of aviation medicine where regular medical officers now receive eight months of training. About half the training in the school of aviation medicine is now comparable to that which would be given in schools of public health.

4. Subcommittee on Preventive Medicine, Committee on Medical and Hospital Services (Hawley Board): General recommendations of the Subcommittee have been approved by the Committee and presented to the Secretary of Defense as of July 13, 1948. "Complete coordination, correlation and standardization of the preventive medicine programs of the Army, Navy and Air Force" are recommended, as well as "joint use of certain facilities", "joint use of consultative groups", and "advancement in the practices and procedures of modern preventive medicine" through coordinated research programs. Implementation of the recommendations requires only administrative action by the Secretary of Defense.

This report was based on the findings of 12 task groups which made studies and prepared recommendations on all aspects of preventive medicine activities.

The report indicates that preventive medicine problems do not differ materially in the three branches of the armed forces, and that valuable and important steps may be taken quite readily and without delay toward achieving "common standards, practices and procedures". While a great deal has already been done along these lines, much of

the coordination has been informal. If policies are developed jointly, it should be possible to make them effective in all three branches of the National Defense Establishment.

The spirit of cooperation shown by the Subcommittee on Preventive Medicine is highly commendable. The problems have been faced squarely. It is highly important that the significant role played by the preventive medicine staff during the past war be recognized fully and adequate provision made to apply all known preventive measures for the welfare of the armed forces, as well as to seek constantly for new methods of preventing disease.

The recommendations of the Subcommittee on Preventive Medicine of the Committee on Medical and Hospital Services of the armed forces should be implemented without delay. Should it become possible to really unify certain services of the armed forces, preventive medicine would be a natural choice among those selected for unification.

C. DEPARTMENT OF AGRICULTURE

Eighteen branches of the Department of Agriculture are sufficiently concerned with health to designate specific financial support to this function. The Bureaus of Human Nutrition and Home Economics, Animal Industry, Dairy Industry and Agricultural and Industrial Chemistry are concerned with health more than incidentally. In the section on Nutrition (Part IV, below) the most important health aspects of the Bureau of Human Nutrition and Home Economics are discussed. The Bureau of Animal Industry works to protect and develop the livestock industry of the country conducting research in the etiology, control and treatment of animal diseases (notably

tuberculosis and brucellosis). It exercises regulatory powers over animal quarantine, biologics for animals, and under the acts providing for inspection of meat (domestic and imported). In 1948 the sum of $11,200,000 was obligated for meat inspection alone.

It would be unwise to attempt to separate these functions and to transfer certain of them to the principal health agency of the government.

The Bureau of Dairy Industry obviously is concerned with milk and milk products, and this is a field in which the Sanitary Engineering unit of the Public Health Service also has vital interests. The problem of controlling the sanitary quality of milk has been a source of friction between the agricultural and health branches of government at all levels. Agricultural interests have been concerned primarily with the economic aspects of production and those in the field of health have focussed their attention on control of human disease spread through milk. Both approaches have value, and it is desirable that the field be divided logically so that primary farm matters will be the major concern of agriculture and the processing and distribution phases the concern of health workers.

The Bureau of Agricultural and Industrial Chemistry works with antibiotics such as penicillin and certain vitamins of importance to human health.

Other health activities in the Department of Agriculture are conducted in various branches. The Bureau of Entomology and Plant Quarantine did important work on DDT and endeavors to develop control methods for insects which transmit human disease; the Bureau

of Plant Industry, Soils and Agricultural Engineering works on methods to improve crop and soil management, thereby aiding human nutrition; the Farmers Home Administration formerly operated certain health insurance programs for rural families; the Production and Marketing Administration operates the federal school lunch program; the Cooperative Extension Service develops educational programs to improve health and nutrition; the Bureau of Agricultural Economics collects among other statistics, figures on the availability of medical services in various rural areas. There are also activities which have certain bearing on health elsewhere in the Department.

The Bureau of Health in the proposed Department of Health, Education and Security should have responsibility for leadership and coordination in the health activities of the federal government. This responsibility should include health activities carried on in the Department of Agriculture to the greatest possible degree, and the latter Department should keep the Bureau of Health informed on all rural health problems.

Other health functions now in the Department of Agriculture should remain there as they constitute integral parts of the work of the Department and more would be lost than gained by transferring them to the principal health agency.

D. DEPARTMENT OF THE INTERIOR

Three programs of this Department are related closely to the health field:

1. Bureau of Mines. (These activities are discussed at length in Part IV of this report.)

2. Fish and Wildlife Service. Research in vitamins obtained from fish liver oils, control of wild animal vectors of human disease (tularemia, typhus, bubonic plague), and studies on stream pollution and its effects on aquatic life have particular health interest. These activities are conducted with the cooperation of related federal, state and local governmental agencies in a manner which is usually satisfactory. There have been some disagreements with the Public Health Service over the jurisdiction of these two agencies over rodent control, but they are no longer serious.

3. Bureau of Indian Affairs. The medical care activities of this Bureau are discussed in the reports of other Subcommittees. There are important public health problems among the Indians, especially tuberculosis. Attempts are being made to control this disease through the use of BCG in carefully controlled experiments in which the Public Health Service is cooperating actively.

RECOMMENDATIONS:

Health activities of the Fish and Wildlife Service are appropriate and consistent with the principal function of this agency.

The direction of health and medical care programs for Indians should be in harmony with the total federal program for them directed toward development of a self-sustaining economy within their cultural

pattern, with rights of American citizenship. As soon as possible present health and medical care programs should be transferred to the states and, in the meantime, facilities and services of state departments of health and other local health agencies should be utilized to extend services to the Indians with such subsidies as are necessary for this purpose.

E. FEDERAL WORKS AGENCY

The Federal Works Agency was created to consolidate federal engineering and construction work "not incidental to the normal functions of other departments" and they have carried on much construction work in the health field during the war under the Lanham Act. At present the Federal Works Agency has no functions under the Hospital Survey and Construction Act, but it is authorized to make loans to states, localities and other public bodies for the control of stream pollution, acting as a sort of "banker", with the Public Health Service determining technical acceptances and priorities. It has been argued that the Federal Works Agency should participate also in the hospital construction program. However, hospitals built under this Act are actually community projects for which the federal government pays one-third the cost, and the community is responsible for subsequent maintenance. In addition, there is the important consideration that the total hospital situation of the entire country must be surveyed and a plan developed to foster the regional development of proper hospitals where they are needed most and where they can be integrated into the over-all medical care and public health facilities of the region.

This is a function which the Public Health Service is best qualified to perform.

The Federal Works Agency also builds and makes alterations in the hospitals of the Public Health Service.

The actual construction of federal facilities, such as hospitals, may be quite properly a function of the Federal Works Agency. In cooperative construction programs with the federal government participating on a grant-in-aid basis or as a lending agency and where the actual construction work is carried on by the state or locality, the administrative roles of the Federal Works Agency or the Public Health Service should be decided on the basis of whether the major role of the federal government is that of construction or of assistance with the determination of needs and priority and the fixing of standards. In the first instance, the Federal Works Agency would be the proper federal administrative agency; in the latter, the Public Health Service.

F. TENNESSEE VALLEY AUTHORITY

The early operations of the Tennessee Valley Authority involved impounding of streams, which created malaria problems, and also involved shifting of population groups. Hence, health protection had to be provided. This was done with cooperation of federal, state and local health agencies. Now that the construction period is largely completed the health problems are different; most of them can be handled through state and local health departments and the medical care facilities available in the various communities.

The Tennessee Valley Authority should continue those health activities which prevent adverse effects on the region and its people which would otherwise be created by activities of the Tennessee Valley Authority. They should continue to develop and stimulate health activities which will enable the region to realize complete health protection, utilizing the framework of its cooperative relations with health agencies of the area.

G. VETERANS ADMINISTRATION

The Veterans Administration is not legally permitted, in the opinion of its legal staff, to carry on preventive activities, but must await the development of actual disease before making its medical facilities available to veterans. No division of preventive medicine is maintained but certain activities of the Department of Medicine and Surgery are actually preventive in nature. When the best possible medical treatment is provided a patient early in his disease, it can be shown readily that complications, sequelae and often death are prevented, and the period of illness and convalescence shortened. This is preventive medicine in its best form.

Mental hygiene clinics are operated at regional offices and some hospitals and definite attempts are made to get patients under treatment early. Members of a veteran's family may be contacted by psychiatric social workers but, if found to be in need of care, they cannot be treated by the Veterans Administration. They must be referred elsewhere even if contributing to the veterans mental problems. There is no reason, however, why the Veterans Administration could not contract with a health department mental hygiene clinic where

one existed, and agree to pay for the care of the veteran so that he and his family might be treated by the same psychiatrist.

At the time of discharge at separation centers numerous veterans were found to have syphilis; many were not previously diagnosed or had received inadequate treatment. The follow-up of this group has been far from adequate. A sample of such cases studied has shown 10,000 positive or doubtful spinal fluid, 150,000 treated but spinal fluid not examined, and 40,000 positive on separation but not treated.

The armed forces have not maintained a syphilis register, although the Hawley Board recommended that they do so in the future. Such a register would facilitate greatly the venereal disease control work of the Veterans Administration. Up to the present time it has been impossible to discover and follow a great many veterans with syphilis who should be receiving treatment.

The problem of "service-connection" is often a knotty one in the venereal disease field, even though to establish service connection it must be shown that the disease was contracted while in service, that the earliest manifestation was reported, and that treatment was continued until the approved conclusion thereof.

Up to 1940, following World War I, the Veterans Administration spent $83,000,000 for medical care of venereal disease. The cost of a case of paresis was estimated at $40,000. At present over a million dollars a year is being paid as compensation to venereal disease cases. If the results following World War II are comparable with those of World War I, the medical care costs alone of venereal disease are estimated at $328,000,000 and compensation would increase

the total to over a billion dollars. It is too early to predict whether newer treatment methods used in World War II will reduce materially the late complications of syphilis which are so costly.

Some very useful preventive measures are in operation which will undoubtedly reduce the costs of providing medical care for tuberculous veterans. Chest X-rays are being made to determine whether tuberculosis is present on all admissions to veterans hospitals and homes, all veterans examined in regional offices, hospital patients if institutionalized more than a year, and hospital personnel annually. New cases of tuberculosis among veterans are being reported at the rate of 450 to 500 per month now.

Tuberculosis case registers are maintained in each of the 67 regional offices to facilitate follow-up. Contacts are listed and health departments notified so that contacts may be followed.

Fortunately, the incidence of tropical disease among veterans has been considerably lower than was anticipated, but it has been important as a preventive measure to search for evidence of such disease.

In summary, preventive measures such as venereal disease control, tuberculosis control and mental hygiene which are likely to save great sums that might otherwise be spent for medical care including hospitalization, should be available readily to veterans. This may be accomplished by (1) authorizing and establishing preventive measures to be carried on by the Veterans Administration, at least in certain fields where it can be shown that savings to the federal government would be enormous; (2) by authorizing and estab-

lishing referral and follow-up system to be operated by the Veterans Administration to make sure that veterans receive the benefits of preventive measures that may be available through private physicians or local community facilities; and (3) by strengthening local health service to make such services available to veterans financially unable to employ a private physician.

Syphilis registers should be established and maintained by the armed forces and made available to the Veterans Administration.

The medical staff of the Veterans Administration should be encouraged in every possible way to have a major interest in prevention, health promotion and rehabilitation. These three approaches to health are relatively inexpensive, yet highly productive. Treatment and alleviation of disease and injury are important, but they are costly.

PART IV. HEALTH PROGRAMS INVOLVING SEVERAL FEDERAL AGENCIES.

Several public health programs are found in more than one federal agency. These programs are primarily promotional or developmental in character and the participation of several federal agencies merely underscores the fact that they cut across established lines of interest.

The pattern of grants-in-aid has been laid down over a long period of time, gradually evolving through realization of needs and through changing concepts of federal-state relationships. The implications of federal versus state powers have been ever present in connection with grants-in-aid and are still a prime consideration.

A. GRANTS-IN-AID.

Grants-in-aid have been in existence almost as long as our government, but the first important grant for health work appeared as part of the Social Security Act of 1935. Subsequently a number of others were enacted into law and about a dozen are now in operation.

The laws setting up the several grants-in-aid are not uniform in their underlying philosophy as to the federal-state relationship in public health administration. Some specifically state their purpose to be an "enabling" one, while others tend to emphasize operation by a federal agency. Economy and efficiency call for clarification of this point.

It is recommended that the Congress re-examine the laws which have set up grants-in-aid with a view towards codifying and unifying them. This would require a determination as to the role of the federal health agency in the administration of public health; whether it is to be a supervisory agency with powers to control practices in the various states, or whether, at the other extreme, it is to be merely a dispensing agent with no authority to set even minimum standards. The best stand would

be at an intermediate point instructing the federal health agency to permit as much administrative autonomy in the states as possible, so that the latter may use the funds most effectively. The federal agency on the other hand must be satisfied that the state has a plan for a program in which the funds are to be used, and that this plan is sound from the point of view of local needs, effectiveness of proposed procedures, and judicious use of the funds. Beyond this, the state health authority should be the determining factor in the administration of the program, so long as the approved plan is carried out.

Grants may be classified chiefly as pertaining either to a group of persons or to a disease. The trend in recent years has been to add categories as interest was aroused, and the continuation of this trend indefinitely will result in a further accumulation of heterogeneous laws, varied administrative practices, and deleterious effects on grantees and public. Each state has its own health problems with considerable variation from one state to another, and emphasis of attack must differ. Categorical grants tend to be too restrictive as regards determination of use by the state health authority. The granting of "block" funds to a state for all purposes combined, such as health, welfare, education, roads, etc., is to be condemned as tending to foster political juggling of use of these funds. Any consolidation of categories should not go beyond a classification of grants for general health purposes as an extreme.

It is recommended that Congress reconsider the categorical versus the general approach in grants-in-aid programs. Fewer categories would increase the determinative powers of the state health authorities, allowing them to concentrate more upon the public health problems which exist in that locality.

The responsibility for carrying out the provision of each act having to do with grants-in-aid is definitely placed, but with no uniformity. The Public Health Service carries most of the current programs but three categories are now outside of it. Though consolidation is not now indicated, the three agencies involved should coordinate their grants-in-aid programs.

With several recent acts, additional advisory councils have been set up, seemingly a top-heavy organization. Either with or without the categorical system, a general advisory council (with specialized consultant committees) would facilitate the administration of these programs. The use of the same council by the Children's Bureau and the Office of Vocational Rehabilitation would bring the programs of all three agencies closer together.

It is recommended that the Congress codify the laws which provide funds for grants-in-aid with a view towards unifying their provisions and their placing of administrative responsibility. The present categorical councils should be transformed into consultant committees to the National Advisory Health Council.

The funds in most programs are apportioned through the use of a formula which weighs: (a) population; (b) financial need; and (c) extent of the problem. Others consider one or more of

these factors, but not all of them. In one instance (dental) the entire matter is left up to a recommendation of the advisory council. Unification in this respect, whether or not the categorical system is retained, would clarify many issues.

It is recommended that the Congress review the modes of apportionment as written into the present acts and codify these provisions so that there is unification. Mode of apportionment on the basis of (1) population, (2) extent of the problem, (3) financial needs of a particular state, (4) such other factors as the advisory council may recommend, would be equitable and reasonable. "Financial needs" should receive more relative weight, in accordance with the basic philosophy of grants-in-aid.

The conditions that the recipient must meet in order to qualify for a grant vary from one act to another. Especially confusing is the requirement in some that the state match the funds, in others that they pay one-third; in others there is no mention of the proportion. Here, too, more rational provisions in the legislation are indicated.

It is recommended that the Congress revise the acts with respect to the conditions that the recipients of grants must meet, in order to rationalize these requirements. It is recommended that these requirements be general rather than specific, and that the chief public health officer be required to consult with the

state and territorial health officers and with the National Advisory Health Council before he promulgates any regulations which govern the conditions which should be met by the states, and that the administrators of other programs consult analagous bodies.

Some acts specify that the state health authority shall administer a grant-in-aid program, some specify a state agency; others make no specific requirement. In order that the standards of public health work be maintained and advanced, health work must be the responsibility of a group professionally qualified to do the job. The state health authority is the agency best qualified for this purpose, and the federal government, in the interest of raising standards, should foster the channeling of health grants-in-aid through it insofar as is possible.

It is recommended that all grants-in-aid relating primarily to health work be administered within a state by the constituted health authority of that state. Merit system requirement should be a legal provision and not a regulatory one.

Within the Public Health Service, grants are administered by five divisions within the Bureau of State Services and by three divisions in other "bureaus." In addition, two other grants operate within the Children's Bureau and one other in the Office of Special Services. Obviously this requires reorganization.

It is recommended that the Public Health Service reorganize its grant-in-aid functions in order to place the administration

of these funds in one unit of the Service, namely a Grants Division to be established in the Bureau of State Services, with the "technical" divisions acting in an advisory capacity. The Children's Bureau and Office of Vocational Rehabilitation should coordinate their grant-in-aid programs with those of the Public Health Service.

Rules and Regulations define and interpret the terms used in the legislative acts. There is some diffusion here, but codification of the acts would lead to simplification of the regulations. The extent to which specific requirements are made of the recipients is nicely balanced and places most of the responsibility for planning and execution upon the state where it belongs.

It is recommended that new rules and regulations be written in accordance with the content of any codification of existing laws on grants-in-aid or any consolidation of the responsibilities pertaining thereto. These new regulations should keep the same balance of responsibility between the federal agency and the respective states.

District officers of the Public Health Service, and of the two other federal health agencies, act in an advisory and consultative capacity to state health agencies and others. There are, in their relationships, some aspects of the supervisory function, but this could and should be minimized as much as possible.

It is recommended that with relation to the states, the consultative and advisory functions of the district offices should be emphasized and their supervisory functions minimized.

Grants in aid have been responsible for: (a) an increase in the number of local health units; (b) coverage of a greater proportion of the population with local health services; (c) the promotion of training and placing of larger numbers of well-qualified public health workers in positions where they could best serve the public; (d) the stimulation of interest in public health and the participation of state and local funds; (e) research, both basic and applied; etc. In short, grants-in-aid have made possible the extension of more and better health services to the people. Further progress is anticipated.

It is recommended that grants-in-aid for public health be considered to have evolved through the "experimental" phase, and that they be recognized as a reasonable and just function of the federal government.

B. FEDERAL FIELD OFFICES FOR PUBLIC HEALTH

Administration of grant-in-aid programs, technical consultation with state and local health departments, domestic interstate and foreign quarantine and other activities involving federal-state relations and direct services demand decentralization in such large operations.

The Public Health Service has maintained nine district offices (in New York, Richmond, Chicago, New Orleans, San Francisco

San Juan, Kansas City, Denver and Dallas) each under a District Director, administering field activities of federal-state programs, and inspecting and facilitating work of field stations of the Service. Specialists representing divisional categorical programs (tuberculosis, venereal disease, hospital construction, cancer control, etc.) have been assigned to districts. All grant-in-aid requests channel through the districts, and other relationships with states are also handled there.

The Children's Bureau field offices were amalgamated with those of the Social Security Administration July 16, 1946, at the time the Bureau was transferred from the Department of Labor. (Offices were located in New York, Chicago, Kansas City, Denver, San Francisco, Dallas, Atlanta, and Washington.) Responsibility is largely decentralized to the field staff in cooperative programs with states. The Division of Health Services endeavors to maintain a team in each region consisting of a medical director, and consultants in nursing, medical social work, nutrition and administrative methods. There is a strong feeling in the Bureau that the "team approach" is of great importance and unceasing effort is made to represent the points of view of the various disciplines in all planning and relationships. The Bureau representative in welfare has coordinate authority and responsibility with the regional medical director.

For the past year or two the Federal Security Administrator has recognized that coordination between field units of the Agency was lacking and a committee has studied various plans. The Association of State and Territorial Health Officers had also found

great difficulty in working with the field offices of the Children's Bureau and the Public Health Service because of their different districts and separated offices, and on December 5, 1946, recommended that districts be made the same and offices be located in the same building wherever possible.

In July 1948 the Federal Security Administrator ordered the organization of ten Regional Offices, (with headquarters in Boston, New York, Washington (may be moved to Richmond), Cleveland, Chicago, Atlanta, Kansas City, Dallas, Denver and San Francisco), each under a Civil Service Director, except for one who is a commissioned officer in the Public Health Service. Although it is too early to evaluate how this new organization will work in practice, it is understood that constituent organizations retain responsibility for program operations and the technical services of bureau staff assigned them, and that there is to be interposed no barrier to communication with technical bureaus in Washington. However, technical correspondence will doubtless be submitted to the Regional Director, and the degree of supervision over technical matters which he exercises will depend somewhat upon his own personality.

The Surgeon General of the Public Health Service appointed on May 18, 1948 a Committee on Organization representing the various bureaus, and in a preliminary report certain recommendations are made regarding district office organization. The districts would become administratively responsible to the Bureau

of State Services rather than the Surgeon General since practically all the activities are in the federal-state relations field. The staff would be composed primarily of general public health administrators rather than the specialized consultants in various fields. The latter would be assigned to demonstration projects, research and investigation centers, regional laboratories and training centers, hospitals, professional schools or detailed to the states. Thus the specialists would become specialists in fact rather than "by declaration" as has been the case not infrequently up to now, and would be available for consultation as needed, and prepared to give really useful technical assistance.

Under the proposed reorganization plan grants-in-aid to states would be centralized under a Grants Division in the Bureau of State Services, quite comparable to the Division of Research Grants and Fellowships in the National Institutes of Health, with administrative responsibility for all categorical grants as well as general health grants to states. Technical problems would be the province of the various technical divisions. The grants program would be the principal responsibility of the district offices; and close coordination with the Children's Bureau health grant program would be sought. This recommended reorganization is sound and should be carried out.

Closely connected with field service are the matters of fiscal and merit system audits of state grant-in-aid programs which have been conducted separately by the various constituent units of the Federal Security Agency. The state and territorial health officers have objected to the separate audits of the

Children's Bureau and the Public Health Service and proposed that they be coordinated. Some action toward this end had been taken prior to June 21, 1948 when the Federal Security Administrator ordered that fiscal and merit system audits for the Agency be centralized under the Office of Federal-State Relations. This includes audits of the Public Health Service, Children's Bureau, Office of Education, Office of Vocational Rehabilitation, and the Bureaus of Public Assistance and Employment Security. In implementing this order, steps apparently are being taken to retain for the program bureaus sufficient voice in the audits to avoid interference in technical problems, which is important.

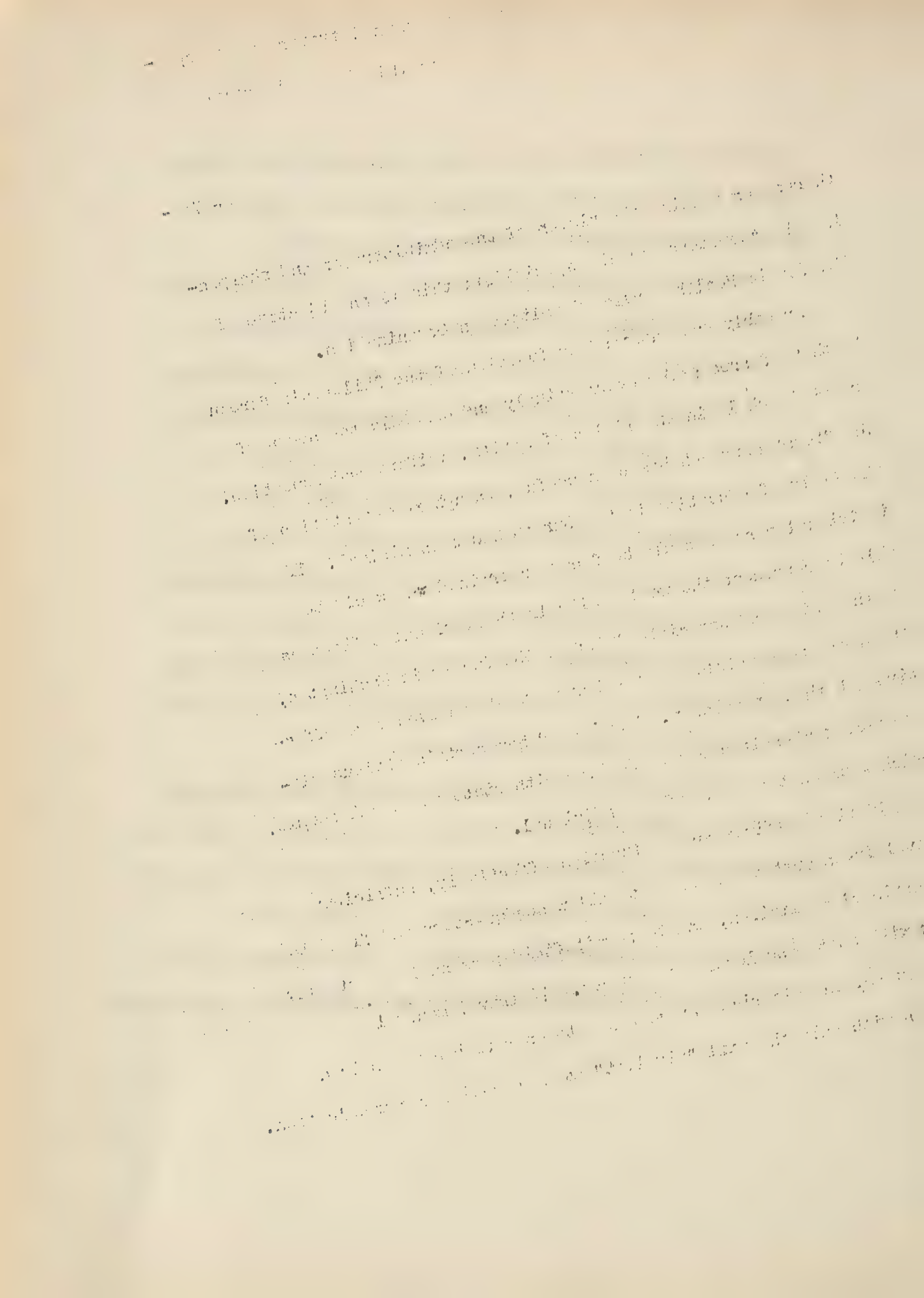
Financial savings will be made under this new audit plan and state and local governments should find the consolidated scheme a great improvement over the previous system.

Proper organization of federal field services is highly important in public health where a major federal function is that of providing technical assistance and stimulation to state and local health departments. Decentralized authority and simple, clear-cut lines of communication are essential. It is quite possible to separate scientific competence from responsibility for the "housekeeping" aspects of office management, which the new Federal Security Agency regional plan is intended to accomplish. It should also be possible to separate the work of specialist consultants from that of grant-in-aid administration,

thereby broadening the vision of the administrator and sharpening the competence of the specialist; this is an objective of the Public Health Service Committee on Organization.

Probably the outstanding function of the Children's Bureau is that of presenting everlastingly and doggedly the needs of the whole child in the fields of health, welfare and education. The "team" approach has been useful, though representation of the field of education in the Bureau has been minimal. If individual persons could be found or trained who would be able to represent the whole child in the Regional Offices as do the Chief and Associate Chief of the Bureau in Washington, it should be possible for the Bureau to do an even more effective job than at present. The "team" has certain obvious disadvantages when it comes to dealing with state and local people, which would not be true of an individual.

If field offices are to function effectively, sufficient travel funds must be provided to allow headquarters and field to maintain close liaison, and to permit field personnel to actually work with state and local governments. If travel money is inadequate, the district office tends to operate behind an iron curtain with only the mail "air lift" as a channel for communication.



RECOMMENDATIONS.

Decentralization of authority and simple lines of communication with the field should be constant objectives. The Regional Office plan of the Federal Security Agency now being set up is generally sound and implements these aims.

Separation of "housekeeping" administrative responsibility and scientific activities, desirable in Regional Offices, should be possible under the new Federal Security Agency plan.

Channels of communication between program bureaus in Washington and their representatives in the Regional Offices must be clear without the interposition of administrative checks by Regional Directors. This does not mean that the Regional Director should be frustrated in well-considered attempts to coordinate Agency programs and to integrate the health, welfare and educational work of the Agency.

Specialist consultants in the health field should be available to Regional Offices, but assigned to duties enabling them to pursue their specialized work actively most of the time, rather than being stationed directly in the Regional Office.

Field representatives of the Children's Bureau should embody in the highest possible degree the coordinated approach to all

the problems of children. A policy should be followed of placing a single individual conversant with the broadest possible range of childhood problems to represent the Children's Bureau in Regional Offices.

Centralization of fiscal and merit system audits by the Federal Security Agency is thoroughly justifiable, but it is highly important that bureaus responsible for program operations retain opportunities to determine policy within their particular fields in matters involving professional judgment.

Adequate travel funds are essential to the efficient operation of field offices.

C. HEALTH EDUCATION

Health education is the sum of experiences which favorably influence knowledge, attitudes, and behavior relating to individual, family, and community health. Its purpose is to close the gap between scientific knowledge and the application of this knowledge to daily life. It includes (a) school health education, which is concerned with providing health instruction of the school age population (and sometimes their parents). This takes place in the school through efforts organized and conducted by school personnel, and is a primary responsibility of the educational agencies of the community. It also includes (b) public health education, which is concerned, directly or indirectly, with all ages of the population, functioning through both public and private agencies in the homes of the people or in the community. It aims to achieve both personal and community health and to provide support for the general public health program through informed public opinion.

The majority of federal agencies concerned with public health carry on health educational activities. The Office of Education is concerned with school health education primarily. Public health education is centered in the Office of Health Education, Bureau of State Services, Public Health Service. It is a primary function of the Children's Bureau in the fields of maternal and child health and the care of crippled children. The Food and Drug Administration, the Department of Agriculture through its Extension Service, home economics demonstrations, etc., the Office of Indian Affairs and the Bureau of Mines in the Department of the Interior, the Department

of Labor in fields related to labor, the Tennessee Valley Authority in its geographic area cooperating with state and local health departments, the Federal Trade Commission in connection with advertising of food and drugs, the Atomic Energy Commission in relation to preventive measures needed where atomic energy is employed, and to a great degree in the armed forces -- all are engaged in health educational activities in its larger sense.

Health education consultants from the Public Health Service work with the health educators of the state health agencies. This consultation service is similar to that conducted by other specialists of the district office, including temporary assignment of personnel. In addition, the Office of Health Education holds occasional national and regional meetings, participates closely in numerous in-service training programs, and assigns personnel to other divisions of the Bureau of State Services, such as tuberculosis and venereal disease.

Closely associated with its consultative and advisory activities, are the interests in qualifications and training of personnel. The staff is active in professional circles which attempt to establish minimum qualifications for workers in this and allied fields, and administers these funds, which provide stipends and tuition for health educators at schools of public health. These trainees represent one of the chief sources of new personnel entering the field of health education, either with official or voluntary health agencies. (Grants are made to physicians and engineers, too.)

Another important work is the demonstration and evaluation of health education programs. One example of such an activity is the interviewing of a sample of population before and after a selected chest X-ray campaign to learn the educational results therefrom. Another is the study of effectiveness of educational material sent to pharmacists upon the latter and their clients.

Through its programs of: (a) consultation to states, local communities, voluntary organizations, and other divisions of the Public Health Service, and coordination of their programs; (b) training of health educators and other health workers, and administration of fellowships; and (c) demonstration and evaluation of health education programs; the Office of Health Education performs functions on a national scale which are similar to those performed by a state division of health education. However, in some states, the latter has certain responsibilities with respect to schools which are not within the scope of this Office, but are a function of the Office of Education.

School health education is a function of the Inter-Divisional Committee on School and College Health Services, Health Instruction, Physical Education and Athletics, composed of representatives from several divisions of the Office of Education. This Committee offers consultant services to states, local school districts, and universities on the several phases of school health programs, and conducts research along professional lines in this field. Consultation is usually on (a) health services, (b) curricula and methods of health instruction, (c) curricula and methods of physical education,

(d) health subjects in education of teachers. In addition, workshops and in-service training institutes, on a regional basis, are conducted by this Committee.

In the office of the Federal Security Admimistrator there is an Office of Publicity and Reports which is the internal information unit for the Agency, chiefly a publicity unit not conflicting with the work of the agencies mentioned above.

There is also a Division of Reports in the Children's Bureau, the main function of which is the preparation of publications and bulletins, consultation on writing techniques to professional workers in the Bureau, news releases, etc.

There has been a tendency to curtail rigidly health education activities of the federal government. This is unfortunate, and restricts legitimate and desirable work that could be highly useful in promoting health and preventing disease. Educational media of such nation-wide coverage as radio (as used by the Farm and Home Hour) and periodicals could well be employed by the federal government to great advantage without interfering with prerogatives of the states. The so-called "workshop" technique of education, condemned by some, has proven merit as an educational method, and should be encouraged rather than proscribed. At the National Health Assembly, May 1948, the section on rural health presented the following resolution:

"One of the greatest problems in rural areas is getting technical information and guidance for the development of plans and programs to improve health services. Since the Congressional

investigation of health workshops, professional health workers from the federal government have not been available to lay groups to provide technical information. To remedy the situation, the rural health section unanimously adopts the following resolution:

"Problems affecting the health of the people can be best solved by local groups meeting together. Government and other agencies at all levels should be free to present to these groups the factual and technical information which, by virtue of their function, they have assembled."

1. Teaching Preventive Medicine to Medical Students

The practicing physician has great opportunities to provide to his patients a preventive type of service and health education under most favorable circumstances. In fact, prevention and treatment are so indissolubly interwoven as to be inseparable. Prevention will be stressed if a preventive point of view was inculcated during his medical education.

The teaching of preventive medicine in medical schools is very uneven and inadequate in the majority of schools. A study in 1946 showed that only 15 of the 79 four-year schools in the United States and Canada devoted at least the recommended four percent of total teaching hours to preventive medicine.

The federal government has already entered the field of subsidizing medical schools in providing funds for cancer and mental health education. It would be even wiser to provide assistance in the general field of preventive medicine teaching.

2. Training of Public Health Personnel

The training facilities for public health workers are inadequate and recent estimates indicate an urgent need for doubling present academic facilities and expanding to an even greater degree facilities for field training. None of the schools of public health serve a single state; all are regional or national and most of them have a large number of foreign students as well. It is a well-established fact that training of foreign students in public health has been one of the best investments in international goodwill which this country has ever made.

The cost of training a student in public health is vastly greater than the tuition income. The problem is one in which the federal government has a great stake, and legislation should be passed providing grants-in-aid for public health training. Such grants should be made direct to the institutions, rather than being channeled through state health departments.

RECOMMENDATIONS

The federal government should engage aggressively in health education of the people, coordinating its activities with national voluntary health agencies and with state and local health departments.

The Public Health Service because of its very broad interests and duties should take primary responsibility for the coordination of all health education carried on by agencies of the federal government to avoid overlapping and duplication as well as to promote complete coverage of the field. Agencies other than the Public Health

Service with important health programs may use health educators and health education techniques advantageously in serving the people, but their work should be correlated with similar work by other federal agencies.

The Office of Health Education in the Public Health Service should advise with all other units of the Service on health education matters.

The Office of Education should develop an active program of school health education to assist state and local departments of education.

The federal government should consider the teaching of preventive medicine to medical students as the field of medical education in which federal subsidy has the greatest possibility of usefulness.

Federal subsidies to institutions and field centers training public health workers should be provided.

D. NUTRITION

Nutrition is probably the most important environmental factor in the attainment of health. Numerous diseases are related closely to dietary deficiencies and optimal health is dependent on adequate nutrition. Improved nutrition is dependent on proper agricultural production, research to extend frontiers of knowledge, training of professional workers in the field and education of the public.

In the federal government nutritional work is dispersed among several agencies. The Bureau of Human Nutrition and Home Economics in the Department of Agriculture studies nutritive values of food and how they are affected by soil, production practices and processing, consumption levels of different population groups, and how consumption compares with requirements. Within the Public Health Service the Division of Physiology in the National Institutes of Health conducts nutritional research and there is also a section on nutrition in the States Relation Division of the Bureau of State Services which is conducting field studies. The Fish and Wildlife Service in the Department of the Interior studies vitamins from fish liver oils and nutritive qualities of fishery products. The Bureau of Labor Statistics in the Department of Labor studies food prices in relationship to consumer income and expenditure. The Children's Bureau has a unit working on nutritional problems of mothers and children. Nutrition teaching in the schools is a function of the Office of Education, and the Agricultural Extension Service

conducts widespread nutrition education activities through county home demonstration agents. It is therefore apparent that many federal agencies are engaged in nutrition work as integral parts of their programs. The need for joint planning is great, and only partially met at present through a "Nutrition Planning Committee" without adequate secretariat.

RECOMMENDATIONS.

Efforts to improve nutrition must be an integral part of agricultural, health, welfare and educational programs of the government, and agencies working in these fields should have adequately staffed nutrition units to see that the nutritional aspects of the programs are dealt with effectively.

Joint planning is a coordination problem that should be dealt with as the primary responsibility of the Director-General of the proposed Bureau of Health insofar as federal agencies are concerned, with the provision of a competent secretariat.

A National Nutrition Council, which might be affiliated with the National Health Council, should be formed on a voluntary basis. This would provide a means of formally coordinating various nutrition interests among voluntary health agencies, food producers and consumers as well as government.

E. INTERNATIONAL HEALTH.

The United States has many international health responsibilities, some with treaty status. The Department of state through the Health Branch of its Division of International Labor, Social and Health Affairs exercises a sort of general policy control to coordinate international health activities with foreign policy. Three principal phases of the work which are noteworthy are those in international health relations, foreign quarantine and narcotic control.

The Office of International Health Relations in the Public Health Service was established in 1945 to conduct international discussions during the transition from United Nations Relief and Rehabilitation Administration to the World Health Organization (of which the United States is now a member) which includes the Pan-American Sanitary Bureau as a sort of regional office. Health missions are now being operated in Greece, Liberia and the Philippines - (the latter operating under the Bureau of State Services.) Fellowship programs for foreign health workers in the United States are also in operation. The Institute of Inter-American Affairs, now under the State Department, is continuing on a reduced scale a cooperative health program with other American republics begun during the war, with 1948 obligations of $5,800,000. The Children's Bureau participates actively in international affairs relating to mothers and children.

The Division of Foreign Quarantine in the Public Health Service functions through medical officers in United States ports and abroad who seek to prevent diseased immigrants from entering the country and from

boarding ships bound for the United States, Epidemiological information now supplied on a global basis by the World Health Organization assists greatly in quarantine work.

Quarantine procedures relating to animals, animal products and food and drugs are administered on a satisfactory cooperative basis by various governmental agencies, including the Bureau of Animal Industry, Customs Division, Fish and Wild Life Service, the Food and Drug Administration, and the Public Health Service.

The Bureau of Narcotics (Treasury Department) works with the State Department in international aspects of narcotic control. Two hospitals for narcotic addicts are operated by the Public Health Service.

RECOMMENDATIONS:

The United States should maintain and enlarge its participation in the World Health Organization and should promote international good will and understanding in the health field through fellowships and other appropriate means, based on its proven effectiveness.

The work in international health relations requires high-level policy decisions and should, therefore, be related closely to the Director-General of the proposed Bureau of Health. Operating functions of foreign missions should be assigned to the proposed Public Health Division.

The foreign quarantine functions of the Public Health Service should be included in the Public Health Division of the proposed Bureau of Health.

Most features of international health activity involve several federal agencies, and coordination should be insured through the same mechanisms suggested for promoting general coordination of health activities.

Narcotic hospitals should be transferred to the Medical Care Division in the proposed Bureau of Health.

F. INDUSTRIAL HYGIENE

Industrial workers are subjected to two special types of hazards, namely, occupational diseases which account for about two percent of total industrial disabilities and nearly 11 million disabling injuries which are incurred annually. Impetus for development of health and safety programs came primarily from the workers and originally governmental aspects were the responsibility of labor departments. More recently, research by health agencies and the availability of funds have stimulated development of industrial hygiene divisions in health departments with a natural tendency toward jurisidictional conflicts with labor agencies.

In the federal government industrial hygiene activities are carried on in three agencies. (a) In the Department of Labor the Bureau of Labor Standards encourages states to develop desirable labor standards, legislation and administration and conducts safety training programs; the Bureau of Labor Statistics prepares estimates of work injuries and studies statistically the effects of working conditions on health; the Women's Bureau formulates standards and policies concerning working conditions

of women; the Fair Labor Practices Division is responsible for working conditions of children (formerly covered by Children's Bureau) but has an inadequate staff. (b) In the Department of Interior, the Bureau of Mines investigates and inspects mines producing products transported in interstate Commerce through an operating staff of 500 for whom no educational qualifications are required - only five years experience in mining. (c) In the Public Health Service the Industrial Hygiene Division conducts research and fosters development of industrial hygiene programs in state health departments under an annual grant-in-aid of approximately $1,000,000 to which all but three states have responded.

RECOMMENDATIONS:

There should be a functional division at the federal level between safety problems including accident prevention, which should be the responsibility of labor, and occupational disease for which the health agency should be responsible. States should be encouraged to amend their industrial codes where necessary to avoid jurisdictional conflicts.

The Bureau of Mines inspection program should be gradually turned over to the states as standards of state inspection are raised. Meanwhile federal inspectors should be employed under Civil Service.

Industrial hygiene programs should be broadened to include a wider interest in such factors as housing, nutrition, etc.

G. MENTAL HYGIENE

For a long time the isolation of the mentally ill was the only interest of government, but certain methods of empirical treatment were added to custodial care. Later, progress in diagnosis and treatment resulted in the clinic or outpatient service. At the present time, medical science has gone one step further and is adapting psychiatric methods to man's everyday experiences in an effort to prevent future mental illness.

There is little scientific proof that the person with an emotional disturbance of today will become, if unchecked, the psychotic of tomorrow. It is well known, however, that such individuals tend to become neurotic, and by their attitudes and personality exert an unfavorable influence upon their associates, especially the young. The concentration of neuroticism in a population can be attacked by mental hygiene and public health methods. Mental, as well as physical, well-being are the desirable goals.

The federal government has long been active in the care of the mentally ill, concentrating on certain categories of individuals, among which are military personnel, other groups of federal employees merchant seamen, veterans, Indians, narcotic addicts, and residents of the District of Columbia. In many programs there has been cooperation with the mental institutions in the states; in some, notably the Veterans Administration an extensive program of care and treatment has been in effect. In addition to institutional care, several federal agencies operate psychiatric clinic services, often in con-

junction with general medical, surgical, or employee health clinics.

Both the programs of hospitalization and outpatient clinics (or dispensaries) tend to emphasize the diagnosis and treatment of mentally ill (or potentially mentally ill) patients -- i.e., the clinical approach.

Preventive mental hygiene is implicit in many activities other than clinical services per se. The so-called morale talks in the armed services, improved inter-personal relationships in the administrative hierarchy, health education activities of various groups, general betterment of socio-economic situations (the sum total of human environment) -- all of these have effect on people which may be termed in a sense, mental hygiene. It is clear that no organized program of government has touched all of these elements of preventive psychiatry nor is it likely that there will be such a program.

Preventive mental hygiene services are conducted by several agencies of the federal government and, through federal subsidies, by the several states and other public and private agencies. Federal programs have usually been a part of general health services, and have been implemented by mental health education among government employees (including military personnel). In addition, the new National Institute of Mental Health has begun a research program, and plans for demonstration mental hygiene programs have been formulated.

State plans have stressed mental hygiene clinics, mental health education in cooperation with community agencies, training of personnel, and a certain amount of research. Grants-in-aid have helped

institutions and individuals in training and research. Because the Mental Hygiene Division of the Public Health Service works so closely with states, its position in the Bureau of Medical Services is somewhat anomalous. A more logical administrative arrangement would place it in the Bureau of States Services where it could work more closely with a proposed grants division.

Since mental hygiene is a relatively new activity in public health practice, much about it remains to be defined. The meaning of mental well-being (individual, community, national), cause and effect relationships, host versus environment (to borrow an epidemiological concept), administrative considerations; these and others need to be worked out through experience and critical evaluation.

RECOMMENDATIONS

The administration of the two hospitals now operated by the Division of Mental Hygiene should be transferred to the proposed Medical Care Service, and the present Division of Mental Hygiene should be transferred to the Public Health Division of the National Bureau of Health. The mental hygiene functions should include demonstration programs coordinated with the activities of state and local agencies and with the National Institute of Mental Health, the provision of consultant services to states and other agencies, and continued study of the programs evolved by these agencies critically and analytically.

Grants-in-aid to states and other agencies and individuals should be continued under the unified grants division with the Division of Mental Hygiene acting in an advisory capacity.

The sponsorship of training of personnel should be continued

to meet the problems of shortage and poor distribution of qualified specialists.

H. RURAL HEALTH

Any discussion of public health problems in the United States necessarily concludes with Mott and Roemer, that "For practically every category of service, with the exception perhaps of the dubious benefits of midwives and patent medicines, the rural population receives services smaller in quantity and lower in quality than the urban and far less adequate than would be warranted by the burden of illness and impairment that it bears."

Rural health problem vitally affect urban population. Rural health problems are generally more serious and improvement is taking place more slowly than in our cities due to inadequacies of health facilities and personnel. This is well summarized by the following figures.

RURAL VS. URBAN HEALTH

	Rural	Urban
Mortality Rate / 100,000 pop. 1940		
Typhoid and parotyphoid fevers	1.5	0.4
Malaria	1.9	0.2
Diphtheria	1.5	0.5
Pellagra	2.4	0.5
Measles	0.7	0.2
Scarlet Fever	0.6	0.4
Whopping Cough	3.2	1.0
Percentage Decrease in Mortality 1900-1940	29.0%	45.0%
Selective Service Rejections		
1917	16.9%	21.7%
1943	46.2%	41.6%
Infant Mortality 1942		
(Infant deaths/1,000 live births)	43.3	34.3
Maternal Mortality 1941		
(Maternal deaths/1,000 live births)	3.5	2.6
Cases of Illness (Committee Costs Med. Care)		
(Per 1,000 population per year)	830	790
(Academy of Pediatrics Survey)		
Ratio physicians per 1,000 children	1.8	4.1
Ratio dentists per 1,000 children	1.0	2.3
Beds in general hospitals per 1,000 children	8.4	15.4

Remedies without number have been suggested. Improvement in farm income is basically important and this has been accomplished to some extent. Extension of full-time well organized local health units throughout rural areas is fundamental, and there is little question that some federal subsidy is necessary to stimulate their extension to provide basic health services. Upon this structure additional services may be built readily. Community hospitals and health centers must be provided in rural and semi-rural areas to attract medical personnel. Modern health workers have been trained rightly to realize that they cannot bring the benefits of present day medicine to their patients without minimum facilities. Methods of mobilizing purchasing power for medical care through prepayment plans in which consumers have a voice must be developed and adapted to rural problems. All preventive and treatment services must be coordinated through local health councils and similar devices.

The answer to the problem of rural health is complex but it can be found. Particularly in states with a high percentage of rural population, the federal government has an essential role to play in finding this answer.

RECOMMENDATION

The federal government through grants-in-aid, technical assistance and other means should increase its efforts to find a solution of rural health problems. Grants are needed especially to promote the extension and improvement of full-time local health departments and to assist in the building and maintenance of hospitals and health centers.

I. MIGRANT LABOR

Between one and five million workers and their dependents lead a nomadic life dependent on seasonal employment in agriculture and industry, going from one state to another. There are three principal "belts" in which migrant workers follow maturing crops from south to north; one in each coastal region and one in the central west. Many of these people have lost all legal residence and are therefore ineligible for many benefits available to other citizens of the United states, including health protection.

Our economy requires a certain amount of migrant labor to meet seasonal needs of agriculture, transportation, and industry. During depressions this type of labor becomes abundant but, during the past war, domestic workers were so scarce that some 200,000 foreign workers were imported from Mexico and the British West Indies. Intergovernmental contracts were made guaranteeing these foreign workers many benefits unavailable to our own citizens, including provisions regarding wages, transportation, housing, health and medical services, continuity of employment and repatriation.

During the war specific arrangements were made to protect the health of foreign migrant labor and to provide medical care. The program was administered by the Department of Agriculture from July 1943 through 1947. The Public Health Service assigned medical personnel for administration, the actual medical care being provided under contracts with agricultural workers health associations, at an annual cost per worker ranging from $32.13 to $49.77 in 1943 and 1947 respectively. Results were quite satisfactory in most respects.

In May 1946 a Federal Interagency Committee on Migrant Labor was established and directed to determine how living and labor standards of migrant workers in industry, transportation, and agriculture could be developed and improved.

The health of migratory workers involves not only the workers themselves but also residents of the various states with whom they have transitory contacts as they move about. Conditions favorable to the spread of communicable disease exist and control measures are required.

The Committee emphasized the need for broad handling of the problem by employer groups, States and the federal government. Needs were set forth: safe transportation, adequate housing, provision for hospital and medical care as well as health services, facilities for child-care and education, elimination of child labor (agricultural work is now more or less exempt from child labor laws) as well as measures to give migrant workers protection under workmen's compensation and social security laws. Federal grants-in-aid should be made available to states in accordance with their needs to assist in providing necessary health, education, welfare and related services.

There is little doubt that unless federal stimulation is provided in the form of leadership and some technical and financial assistance, migrant laborers and their families will continue as a minority group deprived of their rights of citizenship and serving as a menace to the health of communities in which they work. The Rural Health Section of the National Health Assembly in May, 1948, recommended that "a federal tax-supported program to provide health services and medical care for migratory agricultural workers should be enacted."

RECOMMENDATIONS

The federal government should take the initiative in focusing attention on the health problems created by interstate movement of migrant labor, and should enlist whatever aid is possible from State and local government and employer groups involved.

Grants-in-aid should be made available to states affected by the migrant labor problem to assist in building up and maintaining strong health services to control communicable disease and provide medical care for such of these workers as cannot be cared for otherwise.

J. PUBLIC HEALTH DISASTER PREPARATION

Health problems of civil defense in war-time are being studied by the Medical Division of the National Security Resources Board and by the Medical Section of the Office of Civil Defense Planning set up under the National Military Establishment. In omitting the Federal Security Agency from representation on the National Security Resources Board the civilian health problems that would be serious in war apparently have been minimized.

Even during peace floods, hurricanes, explosions and epidemics often assume disaster proportions and require public health organization to protect the people. The American Red Cross as a quasi-governmental organization plays an indispensable role in mobilizing health resources through voluntary contributions, as does the National Foundation for Infantile Paralysis in its special field. Both these organizations are granting increased recognition to the importance of teamwork with governmental and other voluntary health agencies in areas where

disasters occur than, too often, has been the case in the past. Part of the difficulty in cooperation has undoubtedly resulted from imperfect planning by governmental health agencies. The Public Health Service has recently set up the Health Emergency Planning Unit with a small staff to "draw plans for more comprehensive public health catastrophe service to be offered in response to peace-time emergency requests from States" and to "plan a coordinated program for safeguarding public health during a national emergency."

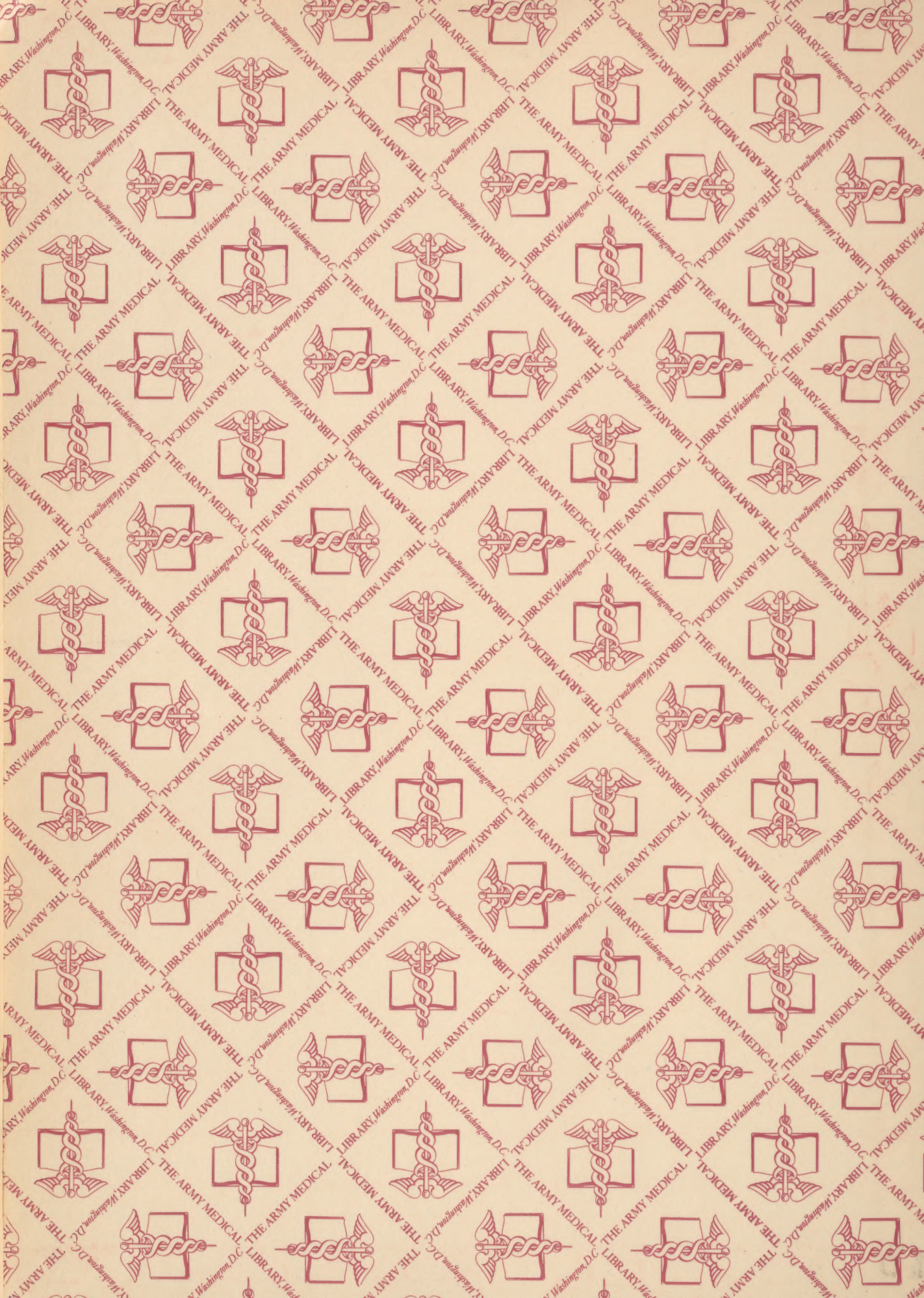
There must be joint planning by all federal and national voluntary agencies which may be involved in providing services in disasters, as well as planning to mobilize fully the resources which the Public Health Service may itself be able to make available.

The Communicable Disease Center represents a relatively new and important development in that all types of medical and auxiliary personnel equipped to deal with epidemics are available for emergency duty upon call by the states. Necessary mobile equipment is at hand. The Center grew out of the program of malaria control in war areas which the Public Health Service conducted so effectively in World War II and which resulted in reducing the incidence of malaria in the armed forces in the continental United States very materially below that which prevailed in World War I.

It would be a wise precaution for the Public Health Service to devlop a group of reserve officers who could be subject to emergency mobilization for disaster service.

RECOMMENDATION

The Health Emergency Planning Unit in the Public Health Service has a useful function in planning for public health participation in disasters and should be continued, its staff being augmented as may be required.


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